VALIDATION/VERIFICATION REPORT
ACR VALIDATION/VERIFICATION OF BLUESOURCE - KOOTZNOOWOO IMPROVED FOREST MANAGEMENT PROJECT
ACR499

Date: 6/16/2020
Version: 1.6

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Technical Reviewer: Pablo Reed

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Project Name	Bluesource - Kootznoowoo Improved Forest Management Project
Project ID	ACR499
Reporting Period	8/20/2018 – 8/12/2019
Client	Blue Source, LLC
Date of Issue	5/6/2020
Prepared By	S&A Carbon, LLC
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Audit Team	Lead Auditor: Lawson Henderson Technical Reviewer: Pablo Reed Verification Support: Robert Turner & Elizabeth McGarrigle Verification Site Visit Team: Lawson Henderson, Alexa Kandaris, Beth Daut, Ryan Harper Project Manager/Approver: Alexa Kandaris

Summary

The Bluesource – Kootznoowoo Improved Forest Management Project includes approximately 19,856 acres of old growth and young growth hemlock-spruce forests on the Dolomi and Dora Bay tracts of Prince of Wales Island. The governing jurisdiction is Prince of Wales – Hyder Census Area, in SE Alaska. Historically, Dolomi and Dora Bay, each of which spread across 10,000 acres, were significant timber sources for the Japanese market after the USA banned round log export sales for federal lands. Strong demand in the 1980s and 1990s resulted in aggressive timber harvest on the Kootznoowoo property.

The project activity is improved forest management. Kootznoowoo, Inc forest management practices represent a significant improvement in carbon storage and conservation value when compared to industrial private lands in the region that emphasize higher financial return and management regimes characterized by shorter, even-aged rotations. Management decisions of the forest focus on sustainable, natural forest growth and maintenance harvests for essential activities and forest health. This project ensures long-term sustainable management, which could otherwise undergo significant commercial timber harvesting. By committing to maintain forest CO2 stocks above the regional baseline level, the project will provide significant climate benefits through carbon sequestration. The project aims to ensure long-term continuance of environmental benefits provided by the preservation of old growth sections and promotion of secondary growth sections.

This report presents the results of the project's validation and initial verification to the American Carbon Registry (ACR) Standards. Its purpose is to systematically assess and report the project's conformance with the ACR standard requirements corresponding to the first reporting period from 8/20/2018 – 8/12/2019. The evaluation involved; document analysis, interviews with interested parties; relevant actors, as well as observations and measurements made directly in the field, while considering a representative sample of the project activities and sites. Validation activities included; forest inventory checks, interviews with project managers, contractors and other relevant stakeholders. The context of the surrounding landscape conditions under the baseline and project scenarios was also assessed. The scope of the verification included the ACR verification of the project's initial monitoring period to determine the project's conformance with the ACR Standard version 6.0, the applied ACR Methodology, supporting ACR Program documents, and implementation of the validated GHG Plan.

The verification was performed through a combination of document review, interviews and communications with relevant personnel, as well as on-site inspections. The site visit to the project was conducted from 24 August 2019 to 27 August 2019, on Prince of Wales Island, Alaska USA. The verification process included several official and documented exchanges between the verifier team and the project proponents in order to gather additional information for review and for examination of compliance with all applicable criteria. These exchanges included 3 rounds of an Issues Log produced by S&A to which the project proponents were required to respond, and for which 12 Non-Conformances, 7 Clarification requests, and 3 New Information Requests were identified. Verifiers confirmed in an email to the project proponents dated 3 April 2020 that all remaining issues were satisfied in the responses provided in the Issues Log.

Once all identified issues were adequately resolved, S&A Carbon drafted this final combined validation & verification report and deems, with a reasonable level of assurance, that the project is in conformance with all of the requirements in the ACR Standards version 6.0, without qualifications or limitations. The

project has been implemented in accordance with the validated GHG Plan over the initial monitoring period with no deviations from the described project activities in the GHG Plan or from the applied ACR methodology.

S&A Carbon is thus able to issue a positive validation opinion of the project's design as outlined in the GHG Plan dated 3 April 2020 and the projected ex-ante GHG emission reductions of 1,518,021 tCO2e over the first 20 year crediting period. S&A Carbon is also able to issue a positive verification opinion for the 150,215 tCO2e of verified emissions reductions, as reported in the Initial Monitoring Report dated 1 April 2020. The verification assessment covered the monitoring period from 20 August 2018 to 19 August 2019 and verified that calculated emission reductions were achieved during the monitoring period with a reasonable level of assurance. The overall risk rating was 18%. Therefore, the total number of credits to be deposited in the buffer account for the initial monitoring period is 27,039 ERTs and the total ERTs to be issued are 123,176 tCO2e.

Abbreviations

ANSI	American National Standards Institute
BMP	Best Management Practices
CAR	Climate Action Reserve
CO_2e	Carbon Dioxide Equivalent
CP	Common Practice
CRT	Climate Reserve Tonnes
EPA	Environmental Protection Agency
ERTs	Emission Reduction Tons
FPP	Forest Project Protocol
GHG	Greenhouse Gas
HWP	Harvested Wood Products
ICS	Initial Carbon Stocks
NRCS	USDA Natural Resource Conservation Service
OMM	Offset Material Misstatement
OP	Offset Provider
PD	Project Developer
PDD	Project Data Document
PP	Project Proponent
RPF	Registered Professional Forester
S&A	S&A Carbon
t	Metric Tonnes
U.S.A	United States of America
USDA	United States Department of Agriculture

1 Introduction

S&A Carbon (S&A) has been asked by Bluesource to verify the emission reductions generated by the Bluesource - Kootznoowoo Improved Forest Management Project (the project). The validation/verification process is required by the American Carbon Registry's Improved Forest Management Methodology for Quantifying GHG Removals and Emission Reductions through Increased Forest Carbon Sequestration on Non-Federal U.S. Forestlands (ACR IFM Methodology), version 1.3. S&A validation/verification activities began on 8/12/2019. This report presents the findings from the validation/verification of the project's greenhouse gas (GHG) emission reductions/enhancements.

The Offset Project Registry (OPR) for this project is the American Carbon Registry (ACR), listed as ACR499.

1.1 Project Participants

Role	Project Participant	Contact Information
Project Proponent	Kootznoowoo, Incorporated	Hal Dreyer, 8585 Old Dairy Rd, Ste 104 Juneau, AK 99801 907-790-2992
Offset Developer	Bluesource, LLC	Josh Strauss 1935 E. Vine Street Murray, UT 84121 949-233-1501
Forest Inventory Contractor	Terra Verde Inc.	Brian Kleinhenz 1200 E. Ennis Ct. La Center, WA 98629-5460 360-263-0677

Entities listed in the table above are collectively referred to as project participants throughout this document.

1.2 Description of Project

The Bluesource - Kootznoowoo Improved Forest Management Project (ACR499) (the Project) is an Improved Forest Management Project (IFM) project, consisting of 19,856 acres of forestland in the state of Alaska. The project consists of old growth and young growth hemlock-spruce forests on the Dolomi and Dora Bay tracts or Prince of Wales Island. The governing jurisdiction is Prince of Wales – Hyder Census Area, in SE Alaska. Historically, Dolomi and Dora Bay, each of which spreads across 10,000 acres, were significant timber sources for the Japanese market after the USA banned round log export sales for federal lands. Strong demand in the 1980s and 1990s resulted in aggressive timber harvest on the Kootznoowoo property.

The project activity is improved forest management. Kootznoowoo, Inc. forest management practices represent a significant improvement in carbon storage and conservation value when compared to industrial private lands in the region that emphasize higher financial return and management regimes characterized by shorter, even-aged rotations. Management decisions of the forest focus on sustainable, natural forest growth and maintenance harvests for essential activities and forest health. This project ensures long-term sustainable management, which could otherwise undergo significant commercial timber harvesting.

Project Commencement Date: 8/20/2018
Reporting Period End Date: 8/12/2019
Crediting Period Start Date: 8/20/2018
Crediting Period End Date: 8/19/2037

1.3 Validation/Verification Objectives

This is the Project's ACR validation and initial verification. This will be a combined project validation and full initial verification, including a site visit to assess the Project's conformance with the ACR criteria outlined below, corresponding to the first reporting period from 8/20/2018 – 8/12/2019.

The objectives of validation are to evaluate:

- Conformance to the ACR Standard;
- 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 emission reductions/removal enhancements, leakage assessment, and impermanence risk assessment and mitigation (if applicable).

The objectives of verification are to evaluate the following:

- Reported GHG baseline, project emissions and emission reductions/removal enhancements, leakage assessment, and impermanence risk assessment and mitigation (if applicable);
- Any significant changes to the project procedures or criteria since the last verification (N/A); and
- Any significant changes in the GHG project's baseline emissions and emission reductions/removal enhancements since the last verification (N/A).

Further, S&A will review the GHG Project Plan, GHG Assertion and any additional relevant documentation to determine:

- That the reported emissions reductions and/or removal enhancements are real;
- Degree of confidence in and completeness of the GHG assertion;
- That project implementation is consistent with the GHG Project Plan;
- Eligibility for registration on ACR; and
- Sources and magnitude of potential errors, omissions, and misrepresentations, including:
    - Inherent risk of material misstatement; and
    - Risk that the existing controls of the GHG project will not prevent or detect a material misstatement

1.4 Validation/Verification Scope and Criteria

Validation shall include examination of all the following elements of a GHG Project Plan:

- Project boundary and procedures for establishing the project boundary;
- Physical infrastructure, activities, technologies, and processes of the project;
- GHGs, sources, and sinks within the project boundary;
- Temporal boundary;
- Description of and justification for the baseline scenario;
- Demonstration of additionality;
- Methodologies, algorithms, and calculations that will be used to generate estimates of emissions and emission reductions/removal enhancements;
- Process information, source identification/counts, and operational details;
- Data management systems;
- QA/QC procedures;
- Processes for uncertainty assessments; and
- Project-specific conformance to ACR eligibility criteria

Verification shall include examination of some or all of the following elements of a GHG Project Plan:

- Physical infrastructure, activities, technologies, and processes of the GHG project;
- GHG SSRs within the project boundary;
- Temporal boundary;
- Baseline scenarios;
- Methods and calculations used to generate estimates of emissions and emission reductions/removal enhancements;
- Original underlying data and documentation as relevant and required to evaluate the GHG assertion;
- Process information, source identification/counts, and operational details;
- Data management systems;
- Roles and responsibilities of project participants or project proponent staff;
- QA/QC procedures and results;
- Processes for and results from uncertainty assessments; and
- Project-specific conformance to ACR eligibility criteria

The criteria for the offset verification services are:

- The American Carbon Registry Standard, v6.0, July 2019
- The ACR Validation and Verification Standard, v1.1, May 2018
- The Improved Forest Management (IFM) Methodology for Non-Federal U.S. Forestlands, v1.3, April 2018
- ACR Tool for Risk Analysis and Buffer Determination v1.0
- ISO Standards 14064-2 and 14064-3, 2006

1.5 Materiality

The verification team must state with reasonable assurance that the percent overstatement of the total reported GHG emission reductions and removal enhancements are no more than a 5.00% overstatement of the "true" GHG emission reductions and removal enhancements, as calculated by the verifier using the equation below. The analysis must consider all errors, omissions or misstatements for the subset of data included in the data checks.

$$\%\ \text{Error} = \frac{\text{Project Emission Reduction Assertion} - \text{Verifier Emission Reduction Recalculation}}{\text{Verifier Emission Reduction Recalculation}} \times 100$$

1.6 Level of Assurance

S&A Carbon provides reasonable assurance that the Project meets the above criteria.

1.7 Audit Team

Role	Name
Lead Verifier	Lawson Henderson
Technical Reviewer	Pablo Reed
Verification Support	Elizabeth McGarrigle Robert Turner
Verification Site Visit	Lawson Henderson Alexa Kandaris Beth Daut Ryan Harper
Project Manager/Approver	Alexa Kandaris

2 Audit Process and Methodology

S&As audit included the following activities:

2.1 Desk Review

A document request and kickoff call agenda list were sent to the PP on 8/14/2019. A kickoff conference call was held on 8/14/2019. The project team and verifiers discussed initial findings from a desk review of submitted documents, targeting aspects of the project and supporting information that might affect the evaluation. Meeting minutes were prepared following the kickoff meeting.

The GHG Plan and Monitoring Report were provided 7/26/2019. The verifiers reviewed these documents and assessed the eligibility criteria required to design, measure, and monitor the Project to the requirements of the FPP. Verifiers confirmed that the ACR eligibility requirements were met. The Verification Plan was completed and sent to the PP.

A draft Sampling Plan was prepared based on information available from the PP. The Sampling Plan evaluates the credibility and rigor of the verification methodology items. A risk evaluation was conducted assessing the Inventory Methodology Verification Items of the ACR Standard. Finally, the plan outlined a sampling scheme, based on the risk assessment and document reviews, to evaluate the projects monitoring system's compliance with the ACR Standard. The final Sampling Plan summarizes the results of the sampling and the data checks performed on the sampled data.

The Sampling Plan will be retained by S&A for a period of not less than 15 years following the submission of the Project Verification Statement. All material received, reviewed, and generated by the provision of Offset Verification Services will be retained by S&A for the same period.

2.2 Site Visit

A site visit was conducted by Lawson Henderson, Alexa Kandaris, Beth Daut & Ryan Harper from 8/24/2019 through 8/27/2019. An opening meeting was conducted on 8/24/2019. Attendees of the opening meeting are as follows:

Attendee	Company	Role	Attend Opening Meeting	Attend Field Sampling	Attend Closing Meeting
Lawson Henderson	S&A Carbon	Lead Auditor	X	X	X
Ben Parkhurst	Blue Source, LLC	Project Developer	X	X	X
Brian Kleinhenz	Terra Verde Inc.	Forest Inventory Contractor	X	X	
Alexa Kandaris	S&A Carbon	Verifier	X	X	X
Beth Daut	S&A Carbon	Contractor, S&A Site Visit Team	X	X	
Ryan Harper	S&A Carbon	Contractor, S&A Site Visit Team	X	X	

During the opening meeting, the objectives of the site visit and overall validation/verification process were presented by the verification team including an overview of the statistical t-test required for verification of the forest inventory; the qualifications of the PP were confirmed; inventory procedures and QA/QC were discussed and clarified; and site visit logistics, personnel and vehicles/transport, and schedules were discussed and planned.

Over the course of four days, verification team activities included the measurement of nine randomly selected forest inventory plots across the project area. Following plot data collection, the verifiers ran their verification data through the t-test. The analysis showed

that the project's inventory was verifiable at a confidence interval of 90%. Further, throughout the site visit, GPS data were collected, conditions of the forested conditions (e.g. species composition, age class, canopy cover) found on the project area was observed, and baseline common practice forest management practices in the surrounding region was assessed.

A closing meeting for the site visit was held on 8/27/2019. Attendees are described in the table above. Other topics also discussed included preparation of the Issue Log, scheduling of the baseline model review call, and drafting of the validation/verification report and proposed schedule; and reflections and learnings from the site visit.

2.3 Quantitative Review (only required for verification)

S&A conducted various quantitative analyses of the project & baseline carbon stocks, covering the relevant carbon pools quantified by the PP, and the inputs used in the calculation of the projected ex-ante emission reductions over the first 20 year crediting period as well as the actual ex-post emission reductions for the initial reporting period (8/20/2018 – 8/12/2019). The audit team implemented a detailed review of all aspects of the carbon stock modeling, including the stratification process, forest inventory design and specifications, measurement techniques used by the PP's inventory crew review of the species in the inventory and the correct assignment of volume and biomass equations, and checks to confirm that modeled growth used to project carbon stocks forward have been calculated and applied correctly. The modeling methods were assessed to ensure an approved model was used, that it was appropriately calibrated for the region, and inventory data flow through the modeling system was reviewed.

The reported ex-post emission reductions were confirmed by tracking all components of the PP's emission reduction calculation workbooks. This included checks that the entries for initial carbon stocks, confidence deduction, baseline stocks, baseline and harvested wood products, and the reversal risk determinations, leakage and uncertainty are all entered and calculated correctly from their computed sources, as well as confirming the accuracy of their sources. The entire inventory treelist was independently recalculated by the verifiers for tCO2e and the results were compared to the PP's reported carbon stocks. Uncertainty and associated deductions were also independently calculated by the verifier. The verifier's methods are considered a complete check of the inventory data on a plot-by-plot level, using the PP's raw data and verification of all the PP's calculations for accuracy and completeness.

For projects where re-sampling is required during verification, guidance received from ACR indicated that VVBs shall resample a minimum of 5% of plots ensuring representation of all strata, and ensuring statistical agreement using a t-test at 90% confidence interval. This minimum sampling intensity was considered in the selection of sample plots to be measured by the verifiers along with allocation of sample plots among individual project strata based on risk. All trees on the selected sample plots were re-measured by the verifiers. In/out status and all diameters, species calls, defect calls, live/dead calls, and all heights were independently measured using tools identical or comparable to those used by the PP. Inventory re-measurement was confirmed to meet the ACR recommendations and all measurement methods were conformed to be consistent with the PP's inventory specification. Carbon per

plot and across the project area was calculated from the sampled plots and compared to the PP's inventory for the same plots. The verifier calculations and the PP's calculations were entered into a t-test worksheet, using the paired plot method (Two-tailed t-test, at the 90% confidence interval), and confirmed to meet the statistical standards expected by ACR for projects that require independent re-measurement for verification.

2.4 Interviews

The following is a list of the people interviewed as part of the validation/verification. The interviewees included those people directly, and in some cases indirectly, involved and/or affected by the project activities. The training and qualifications of the PP team was confirmed by referencing bios for the team on the PP website on 15 November 2019 (http://www.bluesource.com/about-us/the-team/). The verification team also confirmed these qualifications during interviews with PP Staff throughout the validation/verification site visit.

Date	Name	Title
Throughout Verification	Ben Parkhurst	Director, Technical Services – Blue Source, LLC
Throughout Verification	Liz Lott	Director, Forest Carbon Projects – Blue Source, LLC
8/14/2020 3/19/2020	Josh Clark	Director, Forest Carbon Modeling – Blue Source, LLC
8/24-27/2020	Brian Kleinhenz	VP of Operations, Terra Verde Inc.
5/5/2020	Mike Sheets	Tongass National Forest Young Growth Coordinator, USFS
5/5/2020	Samia Savell	NRCS Conservation Service, NRCS, USDA
5/5/2020	Clarie Doig	Forest and Land Management, Owner

2.5 Findings

Throughout the validation/verification, findings were recorded by the audit team as per guidance outlined in the ACR IFM Methodology and supporting documents cited above. Any discrepancies identified by the validation/verification team were documented in the Issues Log. The validation/verification team has also documented in the Issues Log the source of any difference identified, including whether the difference results in a correctable error. The Issues Log was submitted to the client. Prior to completion of the validation/verification, all identified non-conformances were required to be addressed, and correctable errors were required to be fixed. The client submitted additional evidence for S&A's evaluation for conformance. The client corrected all correctable issues.

2.6 Audit Schedule

The following table summarizes the key audit milestones:

Verification Activity	Proposed Date	Actual Date
Project EORP	8/19/2019	8/12/2019*
Kick-off meeting	8/14/2019	8/14/2019
Site visit	8/25/2019 – 8/28/2019	8/24/2019 – 8/27/2019
S&A Carbon submits issues log v1.0	+ 1 month following SV closing meeting	11/15/2019
TC response to issues	+10	1/31/2020
S&A Carbon submits issues log v2.0	+10	3/13/2020
TC response to issues	+10	3/20/2020
S&A Carbon closes out issues log	+10	4/6/2020
S&A Carbon submits validation/verification report for Technical Review	+5	4/24/2020
S&A Carbon submits verification report for TC review/approval	+5	5/6/2020
S&A Carbon submits final validation/verification documents to ACR	+3	5/7/2020

*Revised prior to commencement of validation/verification activities

2.7 Validation Activities

The validation and concurrent verification was performed through a combination of document review, interviews and communications with relevant personnel, as well as on-site inspections. The site visit to the project was conducted from 24 August 2019 to 27 August 2019, on Prince of Wales Island, Alaska USA. The validation/verification process included several official and documented exchanges between the verifier team and the project proponents in order to gather additional information for review and for examination of compliance with all applicable criteria. These exchanges included 3 rounds of an Issues Log produced by S&A to which the project proponents were required to respond, and for which 12 Non-Conformances, 7 Clarification requests, and 3 New Information Requests were identified. Verifiers confirmed in an email to the project proponents dated 3 April 2020 that all remaining issues were satisfied in the responses provided in the Issues Log.

2.8 Eligibility Requirements

The verifiers assessed the project against the eligibility criteria of the ACR Standard as well as the applicability conditions applied the ACR IFM methodology by the project and determined the project to be eligible, and applicable to the ACR methodology. The project applied an ACR approved methodology, Improved Forest Management Methodology for Quantifying GHG Removals and Emission Reductions through Increased Forest Carbon Sequestration on Non-Federal U.S. Forestlands, v1.3. The project was found to meet the eligibility requirements of the ACR Standards in terms of its Start Date, Minimum Project Term, Crediting Period length, Land Eligibility & Title/Ownership, Adherence to Natural Forest Management Requirements and the Permanence of the generated GHG emission reductions. It was also found to meet the applicability conditions of this methodology in terms of land ownership type, legality of harvesting activities, types of project activities and natural forest management criteria.

The project start date is after 1 November 1997, is therefore considered eligible and is within one year of the date in which the initial GHG Plan was submitted to ACR (26 July 2019). The start date is denoted by the date the PP entered into a contractual relationship to implement the carbon project, with supporting documentation provided /R10/, and is the same date as the beginning of the first crediting period. The project is expected to achieve validation against the ACR standards within 3 years of the project start date. The minimum project term stated in the GHG Plan is 40 years as required by the methodology.
The Crediting period is 20 years, consistent with the applied methodology.

The project is an Improved Forest Management (IFM) project type, and as demonstrated through review of historic imagery, it has consisted of forest cover through the project start date and initiation. The current project activities do not involve any commercial harvesting, and currently no such harvesting is anticipated in the future. The verifiers are reasonably assured that the project area is located on non-federally owned lands within the state of AK, USA. The project area lands were conveyed to the Kootznoowoo Native Corporation through the Alaska National Lands Conservation Act, which resulted in the federal US government no longer having jurisdiction over the conveyed lands. As such, the land is considered to be under private ownership, and there are no legally binding restrictions to harvest timber on privately owned lands in the state of Alaska.

The project area is composed of forest cover, made up of 100% native species. The project activity doesn't involve any use of non-native species. The project area is composed of 100% native species, with western hemlock being the most prevalent species at nearly 50% by BA. Even aged management practices typical for the region do not involve any back planting, and vegetation composed of native species is allowed to naturally regenerate. While wetlands may exist on the project area, consisting of muskegs and riparian areas, the project activities do not involve any draining or flooding of wetland areas. The vast majority of the project area is made up of highly variable topography ranging in elevation from at sea level, to approximately 2,000 feet.

The project's GHG Plan outlines a risk assessment conducted in accordance with the ACR Tool for Risk Analysis and Buffer Determination. Percent contributions for each risk category have been applied based on guidance in the tool. Mostly, default risk

values have been applied consistent with the tool. Supporting justification that the project is in a low fire risk region was provided /R3//R4/. The project area is not considered to be of a forested wetland category. The project is also not located in a region with the presence of an epidemic disease or infestation. In total, 18% of the gross emission reductions will be deposited into the ACR polled buffer account. This deduction is made to the gross ERT calculations produced by the PP's to determine the total tradeable balance of ERTs generated by the project over the initial reporting period. Carbon stocks are projected to increase compared to the baseline conditions, through maintenance of stocks, and continued forest growth over time, and the supporting quantification materials have shown an increase in on-site carbon stocks over the initial reporting period.

The table below presents the verifiers' findings pertaining to the Project's Permanence Risk Rating, following the guidance in the ACR Tool for Risk and Analysis and Buffer Determination. The verifiers concur with the assessment offered in the Initial GHG Plan and found that it conforms with ACR guidance for each risk type. The table summarizes the evidence used to support each risk level.

Risk Type	Conform	Finding	GHG Plan	Verifier Check
Financial	Y	Default	5%	5%
Project Management	Y	Default	4%	4%
Social/Policy	Y	Default	2%	2%
Conservation Easement Deduction	Y	Default	0%	0%
Fire	Y	Low Fire Risk Region	2%	2%
Diseases and Pests	Y	Default	4%	4%
Levee Failure and Water Table Changes	Y	Default	0%	0%
Other Natural Disaster Events	Y	Default	2%	2%
Total Risk	**Y**		**18.0%**	**18.0%**

2.9 Additionality

In order to demonstrate the GHG emission reductions from the project are additional and considered to be above and beyond the "business as usual" scenario, it must pass the ACR three-prong additionality test prove that it currently exceeds current effective and enforced laws and regulations; exceed common practice in the relevant industry sector and geographic region; and face at least one of the three implementation barriers (financial, technological or institutional). The project was found to be additional and the project

activities are considered to be above and beyond the business as usual scenario for privately owned commercially managed forest lands in Southeastern Alaska.

The laws and regulations outlined in Section C1 of the GHG plan were found to comprehensively identify the applicable laws that could affect the project. The verifiers assessment of these laws determined that none of them impact the project activities, and require the PP to implement the project activities, thereby demonstrating regulatory surplus. The description of applicable laws and regulations in the GHG Plan was found to consider all of applicable laws and regulations in both the project and baseline activities. Applicable legal constraints were found to be adequately incorporated into the modeled baseline harvest scenario, and the verifiers are reasonably assured all applicable laws and regulations have been considered in addressing the Regulatory Surplus Test. Applicable National, State and local laws assessed by the verifiers included the Federal Clean Water Act, the Federal Endangered Species Act, the Federal Bald and Golden Eagle Protection Act, the Alaska National Interest Lands Conservation Act, the Loggers Guide to the New OSHA Logging Safety Standards, and the Alaska Forest Resources and Practices Act. While Binding International Agreements are described in the GHG Plan, none are considered to impact the baseline scenario or the project activities.

Section B.5 of the GHG Plan offers a reasonable definition of the baseline harvest scenario, which the PP asserts is the common practice harvesting regime in the region for similar types of landowners. The defined common practice baseline scenario "represents an aggressive industrial harvest regime, targeted to maximize net present value at a 6% discount rate (for private industrial forestlands) typical of ca. 2018 practices in the project region on Alaska Native Corporation lands. Baseline practices involve pre-commercial thinning on overstocked second growth stands while simultaneously harvesting merchantable timber on old growth stands. Final harvest for the baseline was modeled for when the stand reached 12,000 BF, with an intermediate round of pre-commercial thinning at 15 years."

The verifiers were provided with a supporting explanation of common practice silviculture in the region, cited from Brian Kleinhenz VP of Operations with Terra Verde. Brian has over 15 years of forestry experience in Alaska, including working with Native Corporations and their forest management operations. The PP asserts that even-aged (clear-cut) harvest, natural regeneration and Pre-commercial thinning in that order and combination is by far the most common silvicultural practiced in Southeast Alaska. This common practice harvesting in the region suggests the defined baseline harvest scenario is indeed common practice in the region, and that this type of management is being applied by both public landowners (e.g. USFS) and private landowners including other Native Corporations. The verifiers interviewed a variety of stakeholders to gain a better understanding of common practice management and harvesting practices in the region. Through these interviews, overall support for the common practice baseline harvesting regime as described in the GHG Plan was communicated to the verifier. The verifiers also conducted internet searches for information pertaining to common silvicultural practices in Southeast Alaska. The verifiers are reasonably assured that the project, and associated project activities, in which there is no current or future commercial harvesting exceed common practice in the timber industry in southeast Alaska, including private lands held by Native Corporations.

The PP has elected to demonstrate there are financial barriers to implementation of the project activities and adherence to the ACR Implementation Barrier Test for additionality. Specifically, the PP asserts the landowner faces limited access to capital in the absence of carbon finance that would prevent them their adoption of the project activities. The overall mission of Koottznoowoo Inc. as a native corporation is to maximize profits for their shareholders. Koottznoowoo Inc. determined that in order to do maximize profits for the corporation, they could no longer rely on timber harvesting, so alternatives to achieve new capital have been sought by the recently hired president of the corporation, Hal Dryer, which ultimately lead to the development of the ACR IFM project. A Financial Attestation document signed by Mr. Dryer on 31 January 2020 /R5/was provided describing the nature of the Koottznoowoo Inc. corporation and their need to raise financial capital as supporting evidence to demonstrate there are true financial barriers for the implementation of the project activities.

The verifiers found the Attestation to generally support the forest owner's limited access to capital and that this represents a financial barrier to the project activities. Based on the verifiers' observations of project area's forest structure, largely composed of younger secondary growth as a result of historic harvesting, it is reasonable to understand the proponent's claim that timber harvesting is not currently a viable option for generating sufficient revenue for the native corporation. Therefore, considering these factors, and the need to raise working capital to fulfill the mission of the organization, the verifiers are reasonably assured the project has met the financial barrier test. In addition, the verifiers were provided with a Net Present Value (NPV) financial analysis for both the baseline and with project scenarios that take into account all costs and revenues from these scenarios. This NPV analysis demonstrates that the projected baseline scenario has an NPV of over 30% higher than that of the project activities. Supporting justification for all cost and revenue assumptions applied in the financial analysis were provided and found to be reasonable by the verifiers /R10/.

2.10 Permanence and Risk Mitigation

The project's GHG Plan outlines a risk assessment conducted in accordance with the ACR Tool for Risk Analysis and Buffer Determination. Percent contributions for each risk category have been applied based on guidance in the tool. Mostly, the default risk values have been applied consistent with the tool. Supporting justification that the project is in a low fire risk region was provided through a link to a USDA Forest Service Report with information on the fire regime found in Alaska, and Southeast Alaska /R3/. This report provides supporting evidence of the low frequency of forest fires in SE Alaska given the wet, cool coastal climate, and dominance of fire sensitive species found in the area. The project area is not considered to be of a forested wetland category. The project is also not located in a region with the presence of an epidemic disease or infestation. In total, 18% of the gross emission reductions will be deposited into the ACR polled buffer account. This deduction is made to the calculated gross ERT calculations generated by the project to determine the total tradeable balance of ERTs generated by the project over the initial reporting period.

Section 5.B of the ACR Standard requires that "Project Proponents of AFOLU projects with risk of reversal shall enter into a legally binding Reversal Risk Mitigation Agreement with ACR/Winrock that allows them to select a reversal risk mitigation mechanism and

details the requirements for reporting and compensating reversals." This Risk Mitigation Agreement must be executed upon completion of the final GHG Plan, which the verifiers understand to be the point in time when ACR approves the final GHG plan and is ready to register the validated project. Therefore the verifiers determined that checking this executed agreement between the PP and ACR doesn't explicitly need to take place before their final submission to ACR, but that the verifiers will need to confirm it has been executed once ACR has reviewed & approved the project just prior to registration.

2.11 Baseline

The verifiers confirm that the baseline scenario represents an aggressive industrial harvest regime, targeted to maximize net present value at a 6% discount rate typical of 2018 practices in the project region on Alaska Native Corporation lands as described in the GHG Plan. The PP asserts that this type of management regime is by far the most common silvicultural practiced in Southeast Alaska on both private and publicly owned lands. The verifiers interviewed a variety of stakeholders to gain a better understanding of common practice management and harvesting practices in the region. Through these interviews, overall support for the common practice baseline harvesting regime as described in the GHG Plan was communicated to the verifier. The verifiers also conducted internet searches for information pertaining to common silvicultural practices in Southeast Alaska. The verifiers are reasonably assured that the project, and associated project activities, in which there is no current or future commercial harvesting exceed common practice in the timber industry in southeast Alaska, including private lands held by Native Corporations.

The baseline (and project) on-site carbon stocks found on the project area were determined through a forest inventory implemented on the project area between April & May of 2019. The inventory design employed a sample of 166 nested, fixed area plots installed on a systematic grid across the project area. The project area was assigned to five sampling strata which were delineated based on average height of stands as determined using a cluster algorithm on spatially explicit polygon level remote sensing data described in the Kootznoowoo Stratification Methodology document. The verifiers found the project's stratification methods to be reasonable, and the inventory methodology to follow standard industry practices.

Growth and yield projections were based on the US Forest Service Forest Vegetation Simulator (FVS), Alaska variant. FVS is identified as an appropriate model in the ACR IFM methodology applied by the project. FVS was calibrated to the conditions of the project area and surrounding region. A site index for western hemlock of 80 was used for all strata and species. This is the default site index value in FVS for Southeast Alaska but was also the recommended site index value given by the project's technical consultant. Verifier coarse checks of site index for the project using "EVAIDator" reports from the USFS FIA online EVALIDator reporting tool found the application of this site index value to be reasonable.

The area (acres) to be cut in each prescription applied in the baseline model was determined using a linear programming model, which found the combination of harvest prescriptions that maximizes NPV over a 100 year period. The specific baseline harvest treatments were derived by applying the most common silvicultural prescriptions that are currently implemented in Southeast Alaska

as outlined in the GHG Plan. The primary constraint incorporated into the baseline model is the required 66 foot buffer surrounding anadromous streams required under the Alaska Forest Resources and Practices Act. Within these required buffer areas surrounding anadromous streams, a "grow" prescription is applied in the baseline model, where no harvesting or silvicultural treatment is applied to these constrained acres corresponding to delineated riparian management areas (RMZs).

Baseline carbon in long-term storage in wood products was calculated based on projected harvest volume removals from the FVS model. Harvest volumes were broken out into the categories of softwood sawlog, softwood pulp, hardwood pulp and hardwood sawlog by referencing the merchantability standards in FVS. Harvest volumes were converted to biomass by applying species-specific specific gravity values references in the USFS Handbook and Miles and Smith 2009. Biomass values were then converted to units of tCO2e using appropriate conversion factors. Carbon transferred into wood products was estimated by applying mill efficiency values sourced from the California ARB Compliance Offset Protocol, for Alaska. Carbon in wood products was then summed across the established wood categories and distributed to various end wood product classes referenced from the California ARB Compliance Offset Protocol, for Alaska. Carbon in long-term storage was then summed for in-use wood products and wood products in landfills to produce annual total tCO2e stored in in-use and landfill by applying the appropriate 100 year storage factors taken from the ACR IFM Methodology. Emissions due to burning logging slash are conservatively assumed in the baseline to be zero. Verifier checks of the baseline carbon storage in harvested wood confirmed the accuracy of the PP's calculations in accordance with the ACR IFM methodology.

2.12 Leakage

According to the ACR IFM Methodology, there may be no leakage beyond de minimis levels through activity shifting to other lands owned, or under management control, by the timber rights owner. If the project decreases wood product production by greater than 5% relative to the baseline then the Project Proponent and all associated landowners must demonstrate there is no leakage within their operations – i.e., on other lands they manage/operate outside the bounds of the ACR carbon project.

As described in the GHG Plan, quantification of leakage is limited to market leakage. The PP does own approximately 2,600 acres of forestland outside of the project area, however the landowner asserts they do not commercially harvest timber anywhere within their ownership, including the lands outside of the project area. The PP therefore asserts there is no activity shifting leakage. The verifiers assessed the additional lands owned by Koottznoowoo Inc. over recent (June 2019) ortho imagery for any evidence of recent harvesting. The verifiers found no obvious evidence of any recent harvesting giving the verifiers assurance there is no harvesting taking place on any of their landholdings and that there is no activity shifting leakage as a result of the project activities.

Quantification of leakage of the project is therefore limited to market leakage. Market leakage was determined by quantifying the merchantable carbon removal in both the baseline and with-project scenarios. Carbon in long-term storage in in-use wood

products and landfills was used to assess relative amounts of total wood products produced in the baseline and project. No commercial timber harvesting is projected to occur in the implementation of the project. The decrease in wood production relative to the baseline was calculated to determine the applicable market leakage discount factor in accordance with the methodology. Since the project activities decrease total HWP produced by the project relative to the baseline by 25% or more over the crediting period, the leakage deduction is 40%. This leakage deduction was found to be correctly determined and correctly applied in the supporting ERT calculation workbook.

2.13 Monitoring Requirements

Section D of the GHG Plan outlines the project's monitoring plan. All appropriate data and parameters to be monitored over the life of the project are outlined including details on the unit of measurement for the data/parameter, a description of the parameter, the data source used, the measurement methodology, monitoring frequency, values applied, procedural and QA/QC references, the purpose of the data and the calculation method. The monitoring plan also indicates that each year, the project will sign and submit to ACR the required attestations confirming; the continuation of the project activities, that ownership of the project area remains clear and uncontested, and a disclosure of any negative environmental or community impacts and if necessary documented plans to mitigate any reported negative environmental or community impacts. A signed copy of this required Attestation was provided for the project's initial reporting period /R5/

Project monitoring is generally focused on the project's on-site carbon stocks through updates to the projects forest inventory data. A full re-inventory of the project area is to take place at least twice over each decade following validation & initial verification to allow for calibration of the growth model and improve the project's carbon sequestration estimates. In additional, affected portions of the project area will be updated periodically in response to natural disturbance events of significant forest management activities. If impacts from such events are significant, the affected areas will be re-inventoried and the with project scenario model will be adjusted to reflect current on-site carbon stocks. For those years in-between when an updated inventory is carried out, on-site carbon stocks will be monitored through forest growth and yield modeling. Beyond forest inventory updates, the PP will continually monitor the general health and condition of the forest through the course of regular forest management activities including road maintenance, ecological studies or boundary maintenance.

QA/QC procedures have been established as part of the monitoring plan and are outlined in section D2 of the GHG Plan. Both field and desk based QA/QC procedures are established. At least 5% of the forest inventory plots will be checked by a different cruiser than the individual who measured the plot. The plot check cruise will involve a full plot measurement to identify any issues or significant discrepancies. Any consistent error will be resolved through discussion with the cruisers who carried out the original measurements or removal of the individual if deemed necessary. The desk QA/QC procedures involve a three staged review process with the intent of ensuring that all field data is appropriately managed and maintained, and that all subsequent calculations of the

data that feed into the ERT issuance are correct. This three staged review process involves independent forester review, technical review and senior management review.

The verifiers were provided with a Check Cruise summary workbook detailing the number of plots and trees checked, the number of errors identified by category (e.g. DBH, Height, Status, In/Out), and the percent error by error category. The workbook also includes all of the original plot/tree data for the check cruised plots, as well as the check cruise data. In total 7% of the forest inventory plots were check cruised. Missed (e.g. incorrect) height calls were the most common error identified during the check cruising. There were not a significant amount of errors identified during the check cruise, not was any systematic bias or error found with any particular cruiser. The verifiers were provided with a QA/QC Summary Report document outlining the dates of the QA/QC activities, responsible individuals, identification of the key issues identified and a brief summary of the revisions and updates made as a result of the quality reviews. While the verifiers did uncover some issues during the verification that were apparently not caught during the project's QA/QC process, the requested detail on the QA/QC procedures has been provided, and the verifiers find no reason to further question the implementation or effectiveness of the established QA/QC mechanisms.

2.14 Community and Environmental Impacts

As part of the GHG Plan, ACR requires all projects to prepare and disclose an environmental and community impact assessment. ACR does not require that a particular process or tool be used for the impact assessments as long as the basic requirements are addressed (e.g. 1-5). Section F1 of the project's GHG Plan outlines the Community and Environmental Impact Assessment addressing the requirements of the ACR Standard.

The project activity is improved forest management. Kootznoowoo, Inc forest management practices represent a significant improvement in carbon storage and conservation value when compared to industrial private lands in the region that emphasize higher financial return and management regimes characterized by shorter, even-aged rotations. By committing to maintain forest CO2 stocks above the regional baseline level, the project will provide significant climate benefits through carbon sequestration. The Project includes approximately 19,856 acres of old growth and young growth hemlock-spruce forests on the Dolomi and Dora Bay tracts of Prince of Wales Island.

Section C.1 of the GHG Plan covers the Regulatory Surplus Test and outlines the applicable laws and regulations. The laws and regulations outlined in Section C1 of the GHG plan were found to comprehensively identify the applicable laws that could affect the project. The verifiers assessment of these laws determined that none of them impact the project activities, and require the PP to implement the project activities, thereby demonstrating regulatory surplus. The description of applicable laws and regulations in the GHG Plan was found to consider all of applicable laws and regulations in both the project and baseline activities.

The project area is solely owned by Koottznoowoo Inc. As a private forestland owner, the PP asserts that there are no communities or other stakeholders affected by the project activities. Updates regarding project development and monitoring are discussed and communicated by the Boards of Directors in their scheduled board meetings. Information regarding the carbon project can be requested from the Board of Directors of the Corporation. As a result of the project area being privately owned and since no communities or other stakeholders are affected by the project activities, there isn't a detailed community consultation and communications plan. Information on the project is available from the Kootz Board of Directors which the verifiers deem to be sufficient in addressing this requirement. The GHG Plan indicates that the project is not a community based project. The verifiers agree with this determination considering the project ownership and design.

The GHG Plan gives a general assessment of the project's environmental risks and impacts, covering the relevant factors outlined in the standard. Impacts have all been categorized as positive, and the verifiers agree with these determinations. As such, there is no need to describe how negative impacts will be avoided or minimized. Monitoring of the risks and impacts is covered in section D.2 of the GHG Plan which gives an outline forest inventory monitoring through on-the-ground measurements and through forest growth and yield monitoring. In addition, management staff will consistently monitor the general health and condition of the forest through the course of normal management activities. Since the project activities are projected to not include any timber harvesting, these monitoring methods are considered to be sufficient. The Impact Assessment includes a description on how the positive impacts contribute to the SDGs as required.

2.15 Stakeholder Comments

The GHG Plan asserts that Stakeholder comments are non-applicable. The Project Proponent, Kootznoowoo Incorporated is a private forestland owner, and adhered to their internally agreed upon practices of project consultation and notification on associated decision making. The PP indicates that they will provide references to the publicly available documentation for the project when requested. Information regarding the carbon project can be requested from the Board of Directors of the Corporation. Information on the project is available from the Kootz Board of Directors which the verifiers deem to be sufficient in addressing this requirement. The GHG Plan indicates that the project is not a community based project. The verifiers agree with this determination considering the project ownership and design.

2.16 Validation Conclusion

During the validation assessment the verifiers identified 12 Non-Conformances, 7 Clarification requests, and 3 New Information Requests. All audit findings were responded to and addressed to the satisfaction of the verifiers. Once all identified issues were adequately resolved, S&A Carbon drafted this final combined validation & verification report. After reviewing the final GHG Plan dated 3 April 2020 and all supporting documentation, the verifiers concluded with a reasonable level of assurance that the project is in conformance with all applicable requirements of the ACR Standards version 6.0. The findings in this report represent the final determinations of the project's conformance with the standard criteria included in the scope of this validation audit. S&A Carbon is

thus able to issue a positive validation opinion of the project's design as outlined in the GHG Plan dated 3 April 2020 and the projected ex-ante GHG emission reductions of 1,518,021 tCO2e over the first 20 year crediting period.

3 Verification Activities

3.1 Project Implementation Status

As previously described in this report, the project's initial verification took place concurrently with the project's validation. The verifiers determined that the project activities were implemented over the initial reporting period corresponding to the dates 8/20/2018 to 8/12/2019 in accordance with the project design established in the GHG Plan. The PP submitted a completed copy of the Monitoring Report (MR) that provides the information required in the ACR monitoring report template. The verifiers are reasonably assured there were no changes to the landowner, project area or inventory over the reporting period, and estimates of the current on-site carbon stocks based on the inventory data are provided. There was no commercial harvesting over the initial reporting period, and the carbon stock data shows no decrease in carbon stocks. No project deviations occurred during the initial reporting period.

The MR outlines the data and parameters monitored over the reporting period, which are found to be consistent with the data and parameters included in the monitoring plan of the GHG Plan. The MR also includes updated reporting on the project's GHG emission reductions including baseline emissions, project emissions, leakage emissions contributions to the buffer pool, and a summary of the net GHG emission reductions at the end of the reporting period. The verifiers confirmed the accuracy of the ERT calculations and consistency with the final values reported in the MR with the supporting ERT calculation workbook /R4/.

Project level live carbon stocks were projected from the original inventory data (April/May 2019) by deriving individual live tree diameter growth rates from the FVS model run with no management (grow only) given the lack of commercial harvesting. Inventory data was grown forward five years in FVS, and for each plot, the average CO2 growth was calculated by dividing the difference between 2018 – 2023 by 5. These projections follow the same basic processes used to degrow live stocks from the inventory to the project start date. No burning of any biomass occurred so emissions from the burning of logging slash is considered to be zero. No commercial harvesting took place so project harvested wood products also equals zero.

The verifiers performed checks on the ERT calculations for the initial reporting period to confirm the accuracy of the PP's calculations. Reporting period ERTs were also calculated using the verifier's internal calculations of end of reporting period on-site carbon stocks as the basis for the materiality checks as presented below.

3.2 Data-Checks & Materiality

A summary of selected data checks for project are provided below. The assigned ranking reflects both the size and uncertainty associated with these SSRs. These and other data checks performed (along with narrative details of the check and results) are included in the verifiers data check log.

SSR (rank)	Data reviewed Checks performed	Reported (PP) tCO_2e	Calculated (VB) tCO_2e	Dis-crepancy tCO_2e	Impact on misstatement/ conformance
Rank 1 Sum of Project stocks; end of RP (CP,TREE,t, CP,DEAD,t, CP,HWP,t, GHGP,t)	Inventory, volume and biomass estimates, grown modeling results, grown tree list. Carbon calculations on inventory. Model appropriateness and use. Data systems. Model performance against independent benchmarks. Checks of accumulations and correct transfer to Monitoring Report	2,649,270.0	2,647,715.0	1,555.0	Impact on OMM
Comment: Discrepancy due to slight differences in strata averages and rounding. This difference is not included in the materiality check. Materiality is based on the difference between the PP and VVB ERT calculation consistent with the ACR standard. The VB's ERT calculation is based on their internal calculations of the sum of project stocks.					
Rank 2 Sum of Project stocks; beginning of RP (CP,TREE,t, CP,DEAD,t, CP,HWP,t, GHGP,t)	Inventory, volume and biomass equations, calculation methods Calculate carbon stocks from inventory.	2,580,253.2	2,580,253.2	0.0	No impact on OMM
Comment:					
Rank 3 20 Yr Average Baseline stocks (live and dead tree CO2e) CBSL,AVE (total)	Monitoring Report and supporting modeling documents, web-based review of methods. Model appropriateness and use. Data systems.	1,578,362.7	1,578,362.7	0.0	No impact on OMM

	Model calibration. Model performance against independent benchmarks. Checks of accumulations and correct transfer to Monitoring Report				
Comment: NA					
Rank 4 Total Uncertainty (UNCt)	Monitoring Report supporting worksheets	0.0 (6.74%)	0.0	0.0	No impact on OMM
	Use PP data for initial stocks; checks the calculation of total uncertainty was done correctly. Recalculated from initial inventory.				
Comment:					
Rank 5 Emissions Reduction at t (after buffer deduction) (CACR,t)	Monitoring Report	123,176.6	122,411.6	764.0	Impact on OMM
	Checks that all PP entries are correct. Check sources. Checks that calculations within the worksheet are correct. Calculation check uses PP values.				
Comment:					
Rank 6 HWP Baseline (CBSL,HWP,t)	Monitoring Report, supporting worksheets	12,999.2	12,999.2	0.0	No impact on OMM
	Model results, HWP worksheet. Confirm model projections and sums. Correct use of appropriate mill efficiencies, product classes and long-term storage factors.				

Comment:					
Rank 7 HWP Project (CP,HWP,t)	Monitoring Report, supporting worksheets On-site observations, GIS review, interviews with the PP.	0.0	0.0	0.0	No impact on OMM
	Model results, HWP worksheet Confirm model projections and sums. Correct use of appropriate mill efficiencies, product classes and long-term storage factors.				
Comment:					
Rank 8 Leakage (LK)	Monitoring Report, supporting documents.	(40.0%)	(40.0%)	0.0	No impact on OMM
	Confirm model projections and sums. Correct use of HWP worksheet				
Comment:					
Rank 9 Buffer Credits and Risk Rating (TBt)	Monitoring Report, calculation workbooks, supporting worksheets	27,039.0 (18.0%)	27,039.0 (18.0%)	0.0	No impact on OMM
	Checks that all PP entries are correct. Check risk rating and calculations have been calculated correctly.				
Comment:					

The verification team must state with reasonable assurance that the percent overstatement of the project's total reported GHG emission reductions and removal enhancements is no more than a 5.00% overstatement of the "true" GHG emission reductions and removal enhancements, as calculated by the verifier using the equation below. The analysis must consider all errors, omissions or misstatements , for the subset of data included in the data checks. Any errors, omissions or misstatements are identified separately in the table above.

$$\% \text{ Error} = \frac{\text{Project Emission Reduction Assertion} - \text{Verifier Emission Reduction Recalculation}}{\text{Verifier Emission Reduction Recalculation}} \times 100$$

Project ERTs – Verifier ERTs*	Verifier ERTs (after buffer deductions) CACR,t	**Calculated Materiality %**
764.0	122,411.6	**0.62%**

*Note: In this column, a positive value represents *over-reporting* by the PP.

The Materiality Calculation shows that the project is 0.62%, over-reporting. Therefore, the project is less than the 5.0% materiality threshold.

3.3 Verification Conclusion

During the verification process, the S&A verification team gathered evidence to evaluate the project design, the project implementation, and assess the accuracy of the GHG assertion associated with the reporting period.

After review of all project information, procedures, calculations, and supporting documentation, S&A confirms that Project reporting is accurate and consistent with all aforementioned criteria and requirements of the ACR Standards. S&A confirms all verification activities, including objectives, scope and criteria, level of assurance, and project documentation adhere to the ACR Standards. S&A concludes without any qualifications or limiting conditions that the Project meets the requirements of the ACR Standards.

S&A has verified the PP's GHG assertion of *123,176* tCO_2e for the Reporting Period of 8/20/2018 to 8/12/2019.

	Total ERTs (tCO_2e)	**Total ERTs to Buffer Pool (tCO_2e)**	**ERTs net (tCO_2e)**
Total 2018 Vintage	55,962	10,073	45,889
Total 2019 Vintage	94,253	16,966	77,287
Total for RP1	150,215	27,039	123,176

APPENDIX A: REFERENCE LIST

Project Documents

Ref #	Document Description		Filename
/R1/	Listing Form		Kootznoowoo_ListingForm_8_2_19.pdf
/R2/	Monitoring Report		Kootznoowoo_MonitoringReport_06_03_20.pdf
/R3/	GHG Plan		Kootznoowoo_GHG Plan_6_3_20.pdf
/R4/	Calculation Workbooks	Monitoring	Kootznoowoo_100Yr_Calcs_4_1_20.xlsx
		ER Calcs	Kootznoowoo_RP_ERT_HWP_6_3_20.xlsx
		Start	Kootznoowoo_Start_RP_CO2_01_31_20.xlsx
/R5/	Attestations		Kootoznoowoo- Offsets Title Attestation.pdf Kootznoowoo- Attestation of Regulatory Compliance.pdf Kootznoowoo Financial Attestation.pdf Kootznoowoo Secondary Leakage.pdf Kootznoowoo- Voluntary Offset Project Attestation.pdf
/R6/	Ownership		ANILCA Conveyance Recorded Document.pdf Kootz LS Map 2_13_2019 Csize.pdf Kootz LS Map By IC_ 2_13_2019 Csize.pdf Kootznoowoo-Patent of interim conveyances.pdf TWP_C0780S0890E_06112019150744.pdf
/R7/	Modeling	Inputs	Kootznoowoo_Inventory.xlsx Kootznoowoo_Inventory_Master.xlsx Kootznoowoo_monthlyGrowthSchedule.xlsx Kootznoowoo_SiteIndex.xlsx Kootznoowoo_TimberPrices.xlsx
		R Code	Kootznoowoo_Parameters.R Parameters.R processFVSoutput.R
		FVS	Kootznoowoo_IndTreeGrow.mdb Kootznoowoo_IndTreeGrow.key Kootznoowoo_INVENTORY.mdb FVS.zip
/R8/	Inventory	Methodologies	Kootznoowoo_Carbon_Plot_Methodology_2_27_19.pdf Kootznoowoo Stratification Methodology.pdf
		QA/QC	Kootznoowoo Check Cruise FINAL.xlsx Kootznoowoo_QAQC_Report_1_15_20.pdf
		Treelist	Kootznoowoo_Plot_Data_8_16_19.xlsx

/R9/	Spatial	Boundary	Kootz_Boundary_7_1_19.shp
		Plots	Kootz_Plots_6_18_19.shp
		RMZ	Kootz_RMZ_06_18_19.shp
		Strata	Kootz_Strata_7_1_19.shp Kootz_IfSAR_v5b.shp
/R10/	Reference Documents	Harvest Costs	Kootz_SoutheastAlaska_Cost_Value_3_20_20
		Eagle Mgmt	Eagles.msg
		Walk Through	Ducey_2004_WalkthroughMethod.pdf
		Bluesource-Landowner Agreement	BlueSourceAgreement 08.20.18_executed_Redacted.pdf

Verifier Documents

Ref #	Document Description	Filename
/R1/	Project Specific COI Form	ACR499_COI Form.docx
/R2/	Validation/Verification Plan	ACR499_Validation-Verification Plan.docx
/R3/	Sampling Plan	ACR499_Sampling Plan.docx
/R4/	Data Check Log	ACR499_DataCheckLog_6May2020.xlsx
/R5/	Issues Log	ACR499_IssuesLog_v2.1_6April2020.xlsx
/R6/	Site Visit t-Test	BS_KootzT-Test Worksheet.xlsx

APPENDIX B: FINDINGS LIST

Verifier Issue	Issue ID: 19-1	Status: Closed	Checked by: RJT/LH	Date Identified 15-Aug-19
ACR Standard ref	**GHG Plan Section**	**Significance**	**Issue Description**	**Comments**
ACR IFM Methodology, 3.1	CO2 Calculation Workbook	Non conformance. *May impact OMM or conformance.*	The verifiers found that some columns in the Stats_RP tab stat contain incorrect values and apply the wrong expressions in the High and Low strata categories. These must be corrected and will have implications throughout the carbon stock analysis and reporting.	Kootznoowoo_Start_RP_CO2_7_21_19.xlsx
			Findings from Review 18 August 2019: Verifier review of the updated CO2 Calculation workbook confirmed that the incorrect values and expressions have been corrected by the PP. This issue is therefore considered closed.	*Kootznoowoo_Start_RP_CO2_8_16_19.xlsx*
OPO/APD Response				
Date	***PP Comment***			***Additional evidence submitted for review by PP***
16-Aug-19	Pivot tables and affected cells have been corrected. The updates are saved in the file "Kootznoowoo_Start_RP_CO2_8_16_19.xlsx" We are currently working to update all other calculations affected by the updated start/eorp CO2 calcs.			Kootznoowoo_Start_RP_CO2_8_16_19.xlsx

Verifier Issue	Issue ID: 19-2	Status: Closed	Checked by: RT/LH	Date Identified 15-Aug-19
ACR Standard ref	**GHG Plan Section**	**Significance**	**Issue Description**	**Comments**
ACR IFM Methodology, 3.1	CO2 Calculation Workbook	Possible non conformance. *May impact OMM or conformance.*	The Methodology (§ 3.1.1 and 3.1.2) prescribes the required biomass methods. The PP uses variations of these prescribed methods in their calculations. Verifiers request documentation from ACR or other sources that support the PP's methods for live and dead tree biomass, particularly with respect to sapling trees. The ACR methodology refers explicitly to the CRM method. This method has specific methods for sapling trees, which seem appropriate to this project, but are not used.	*Kootznoowoo_Start_RP_CO2_7_21_19.xlsx*
			Findings from Review on 18 August 2019: The verifiers would have liked to see the PP elaborate on this diversion from the CRM methodology in more detail and offer documentation confirming acceptance of this approach by ACR and any associated guidance given by ACR. The verifiers believe they have the obligation to seek clarification on this approach, and acceptance by ACR for use in the project.	*Kootznoowoo_Start_RP_CO2_8_16_19.xlsx*

			<u>Findings from Review on 26 August 2019:</u> The verifiers had various follow-up email communications and phone calls on this question between 18 – 26 August 2019 attempting to explain the concern with the approach being applied, ACR's perspective on the methods, and if the approach as taken was/is acceptable. This included a conference call between the verifiers, PP and ACR held on 26 August 2019. During this call, and through a follow-up email submitted to ACR by the PP, they explained their rationale for their methods as meeting the methodological requirements as follows. The project and baseline scenarios were projected in the FVS-AK variant for the 100-year scenario. Projections were annualized using linear interpolation. Direct biomass carbon estimates for live trees were output via FVS FFE carbon reports, using Jenkins et al 2003 biomass predictions in metric tons of carbon per acre, matching the calculations applied to the forest inventory measurements. Standing dead wood was modeled using the Fire and Fuels Extension of FVS (FVS FFE) to produce detailed snag lists for each model cycle. Biomass carbon of each snag was estimated using model output cubic foot volumes of hard and soft components of dead wood, multiplied by dead wood density. Dead wood densities were referenced from the US Forest Service Wood Handbook or from Miles and Smith 2009[1], and incorporated deductions for decay classes corresponding to the hard and soft dead wood components output from the FVS FFE model and summarized in the table below. Belowground biomass was estimated for hard classes of standing dead wood applying component ratios from Jenkins et al 2003. Standing dead biomass was converted to carbon applying a carbon fraction of 0.5, and carbon converted to carbon dioxide equivalent (CO2e) applying a conversion factor of 3.664. We followed the approach outlined in section 3.1 of the methodology which says the following: **3.1 Stocking Level Projections in the Baseline** *CBSL,TREE,t* and *CBSL,DEAD,t* must be estimated using models of forest management across the baseline period. Modeling must be completed with a peer reviewed forestry model that has been calibrated for use in the project region. The GHG Plan must detail what model is being used and what variants have been selected. All model inputs and outputs must be available for inspection by the verifier. The baseline must be modeled over a 20-year period.	*Kootznoowoo_Start_RP_CO2_8_16_19.xlsx*

			Examples of appropriate models include: • FVS: Forest Vegetation Simulator • SPS: Stand Projection System • FIBER: USDA, Forest Service • FPS: Forest Projection System by Forest Biometrics • CRYPTOS and CACTOS: California Conifer Timber Output Simulator Models must be: • Peer reviewed in a process involving experts in modeling and biology/forestry/ecology • Used only in scenarios relevant to the scope for which the model was developed and evaluated • Parameterized for the specific conditions of the project The output of the models must include either projected total aboveground and below ground carbon per acre, volume in live aboveground tree biomass, or another appropriate unit by strata in the baseline. Where model projections are output in five or ten year increments, the numbers shall be annualized to give a stock change number for each year. If the output for the tree is the volume, then this must be converted to biomass and carbon using equations in Section 3.1.1. If processing of alternative data on dead wood is necessary, equations in section 3.1.2 may be used. Where models do not predict dead wood dynamics, the baseline harvesting scenario may not decrease dead wood more than 50% through the Crediting Period. As such, we used the FVS AK variant, which includes projections of aboveground and belowground carbon per acre, so sections 3.1.1 and 3.1.2 were not needed to convert volume estimates too carbon. ACR subsequently emailed the PP confirming the acceptance of the methods as applied. ACR indicated that they examined the language within the ACR IFM methodology and determined the methods you cite are in line with those specified in the methodology. Since FVS outputs carbon directly, the methods in Section 3.1.1 are not applicable. Section 5.1 of the ACR IFM methodology also states "The Project Proponent must use the same set of equations used in Section C3.1.1, C3.1.2, and C3.2 to calculate carbon stocks in the project scenario". In situations where Section C3.1.1 is N/A, ACR requires that the same set of equations used in Section C3.1 are used to calculate carbon stocks in the project scenario.	

			As ACR has confirmed acceptance of the methods applied by the PP, this issue is considered closed.	

OPO/APD Response		
Date	***PP Comment***	***Additional evidence submitted for review by PP***
16-Nov-19	We have applied the 5 steps outlined in Methodology § 3.1.1 for all trees. These steps specify how to calculate aboveground and belowground biomass components. Based on the given instructions, saplings were not interpreted to require a separate set of calculations. This quantification methodology has been applied and approved on previous ACR-IFM projects.	Kootznoowoo_Start_RP_CO2_8_16_19.xlsx

Verifier Issue	**Issue ID:**	19-3	**Status:** **Closed**	**Checked by:** **RT/LH**	**Date Identified** **15-Aug-19**
ACR Standard ref	**GHG Plan Section**	**Significance**	**Issue Description**		**Comments**
ACR IFM Methodology, 3.1.1	CO2 Calculation Workbook	Possible non conformance. *May impact OMM or conformance.*	The verifiers request confirmation that the TreeData tab represents the Inventory data. Please also confirm that cruisers appear to have never used the walk-through method for any plots. Also, it appears all plots contain tree data. Please confirm that there were no null plots.		*Kootznoowoo_Start_RP_CO2_7_21_19.xlsx*
			Findings from Review on 18 August 2019: The response to this issue confirmed that the inventory data is indeed represented on the TreeData tab of the CO2 Calculation workbook. The inventory did include walkthrough plots, though most didn't have any double tally (walkthrough) trees. There were no null tree plots, though one plot had no large/overstory trees and several plots had no sapling/subplot trees. The raw plot data with the cruiser notes has now been provided allowing the verifiers to review the raw inventory data. The verifiers checked the walk through plots in GIS to assess the appropriateness for use of the walkthrough method and found no issues. The questions raised in this issue about the inventory plot and tree data have been satisfied and this issue is considered closed.		*Kootznoowoo_Start_RP_CO2_8_16_19.xlsx* *Kootznoowoo_Plot_Data_8_16_19.xlsx*

OPO/APD Response		
Date	***PP Comment***	***Additional evidence submitted for review by PP***
16-Aug-19	TreeData tab represents the inventory data. There were walkthrough plots (1074,1097,1102,1125,1139,1141,1156,1180,1192,1206,1250), most did not have double counted trees. One plot had no large trees measured (1092), while several had no small trees on the subplot (1017,1124,1129,1169,1199,1202,1218). The original plot notes provided by the inventory crew have now been provided Kootznoowoo_Plot_Data_8_16_19.xlsx.	Kootznoowoo_Start_RP_CO2_8_16_19.xlsx

Verifier Issue	Issue ID:	19-4	Status: Closed	Checked by: RT/LH	Date Identified 15-Aug-19
ACR Standard ref	**GHG Plan Section**	**Significance**	**Issue Description**		**Comments**
ACR IFM Methodology, 3.1.1	CO2 Calculation Workbook	Possible non conformance. *May impact OMM or conformance.*	The verifiers note that one Live tree has an assigned decay class. Please confirm whether this tree should be a live tree with no decay class, or a dead tree with a decay class of 1. Also, 4 trees have been assigned a decay class of 5, the ACR methodology allow only 4 decay classes. The verifiers request that the inventory methodology is reviewed for consistency with the ACR standard, and to provide clarity on the density reduction applied to decay class 5 trees.		*Kootznoowoo_Start_RP_CO2_7_21_19.xlsx*
			Findings from Review on 18 August 2019: The verifiers are satisfied with the response given in regard to how decay class 5 trees as collected in the field were cross-walked to decay class 4 of the ACR standard. The live tree assigned with a decay class was an error that has been corrected in the updated CO2 Calculation Workbook. While the inventory methodology was not updated, the crosswalk applied to trees recorded as a decay class 5 to a decay class 4 of the ACR standard is considered acceptable. This issue is therefore considered closed.		*Kootznoowoo_Start_RP_CO2_8_16_19.xlsx* *Kootznoowoo_Plot_Data_8_16_19.xlsx*
OPO/APD Response					
Date	***PP Comment***			***Additional evidence submitted for review by PP***	
16-Aug-19	Data was recorded as decay class 5 in the field are crosswalked to decay class of 4 of the ACR-IFM methodology. Please see the "DecayClass" tab for the crosswalk. Note that Decay classes 1-4 recorded in the field are not affected, only Decay class 5 recorded in the field.			Kootznoowoo_Start_RP_CO2_8_16_19.xlsx	

Verifier Issue	Issue ID:	19-5	Status: Closed	Checked by: MD/LH	Date Identified 15-Aug-19
ACR Standard ref	**GHG Plan Section**	**Significance**	**Issue Description**		**Comments**
ACR IFM Methodology, 3.1.1	CO2 Calculation Workbook	Non conformance. *May impact OMM or conformance.*	In cases where there is a phantom height, it appears the phantom height is not used in the calculation of stocks. Instead, a measured/actual height is grown ahead and stock calculations use this height. In effect, defect for broken top trees appears to be double-counted, as defect that includes the broken top section is applied to the biomass based on this non-phantom height. The choice of measured height for broken-top trees and the logic used to apply defect to measured/actual heights needs to be explained and justified or corrected.		*Kootznoowoo_Start_RP_CO2_7_21_19.xlsx*

			In addition, the calculation of !TreeData.Col V [Defect (based on Total Height)] is incorrect, resulting in the [Computed Defect] column producing results that are inconsistent with the logic implied in the expression. Computed defect must be corrected.	
			Findings from Review on 18 August 2019: Regarding the question about how defect was applied to trees with broken tops, the verifiers don't find the response to fully address the question. The question was intended to cover all trees with broken tops, not trees with dead tops. The verifiers still need a supporting explanation on the choice of applying defect using the measured height for broken-top trees with justification for the logic used, or otherwise the approach should be corrected. The verifiers would like clarity on this question before rerunning their internal calculations on the updated inventory dataset provided.	*Kootznoowoo_Start_RP_CO2_8_16_19.xlsx* *Kootznoowoo_Plot_Data_8_16_19.xlsx*
			Findings from Review on 20 August 2019: Upon further consideration, the verifiers agree with the response to this question, in that height isn't used in Jenkins, just diameter. The corrections requested do affect the calculation of defect, but the defect % is applied to biomass. The verifiers proceeded with importing the updated inventory dataset to rerun their internal calculations. The noted errors with the computation of defect were confirmed to be corrected in the updated version of the CO2 Calculation Workbook provided, as described in 16 August 2019 response to this issue. This issue is considered closed.	*Kootznoowoo_Start_RP_CO2_8_16_19.xlsx* *Kootznoowoo_Plot_Data_8_16_19.xlsx*

OPO/APD Response		
Date	***PP Comment***	***Additional evidence submitted for review by PP***
16-Aug-19	Updated formula to ensure that "Total Height Degrown(Ft)" column in "StartDate_Tree_CO2" tab and "Total Height Grown (ft)" column in "RP_Tree_CO2" tab reflect phantom height when recorded. The calculation for column V –"Defect(based on total height)" was incorrectly dividing by 100. This error has been corrected, and pivot tables refreshed to reflect updated outputs. In discussing how the inventory was carried out with TerraVerde, in instances where live trees had dead tops, the measured height was recorded to the top of the highest green leaf, while the full height of the standing tree including dead tops was recorded as the estimated height. Defect was recorded to the top of the measured height. For these trees, defect is very conservative as they are treated similarly to broken tops and calculated defect is applied to these trees. Detail on how this was measured will be added into the inventory methodology.	Kootznoowoo_Start_RP_CO2_8_16_19.xlsx

19-Aug-19	We confirmed that the Jenkins equations used to calculate carbon stocks do not have a height input so neither use the degrown/grown phantom height nor the measured height. So specifically, in the calculation worksheet the total height grown/degrown (column M) is not applied in the computation of carbon stocks. For broken top trees, we apply the greater of either the calculated defect using phantom height or the calculated defect using the thirds method to ensure we are capturing defect as applied to the tree to the phantom height. So, as Jenkins does not have a height input, we do not believe defect to be double counted.	Kootznoowoo_Start_RP_CO2_8_16_19.xlsx

Verifier Issue	**Issue ID:** 19-6	**Status:** **Closed**	**Checked by:** **LH**	**Date Identified** **15-Aug-19**
ACR Standard ref	**GHG Plan Section**	**Significance**	**Issue Description**	**Comments**
ACR Standard, 2.B.6	GHG Plan, D.2	Possible non conformance. *May impact OMM or conformance.*	The field QA/QC process claims at least 5% of plots were visited in an audit of the inventory crews. The verifiers request a list of the plots that were visited, dates of the visit, the individuals performing the audit, and the results of the check audit including any corrective actions taken. While the GHG plan outlines a detailed QA/QC review process, given the number, and nature of the quantification issues identified, the verifiers question the effectiveness of the QA/QC systems and their implementation. The verifiers request supporting documentation demonstrating the implementation of the QA/QC system, including the dates of review, individuals responsible for reviews, issues identified during reviews, and a summary of revisions/updates made as a result of the QA/QC reviews.	*Kootznoowoo_GHG Plan_7_26_19.pdf*
			Findings from Review on 18 August 2019: The verifiers were provided with a Check Cruise summary workbook detailing the number of plots and trees checked, the number of errors identified by category (e.g. DBH, Height, Status, In/Out), and the percent error by error category. The workbook also includes all of the original plot/tree data for the check cruised plots, as well as the check cruise data. The check cruise data was used as the final plot/tree data used in the quantification of on-site carbon stocks. In total 7% of the forest inventory plots were check cruised. Missed (e.g. incorrect) height calls were the most common error identified during the check cruising. There were not a significant amount of errors identified during the check cruise, not was any systematic bias or error found with any particular cruiser.	*Kootznoowoo Check Cruise FINAL.xls* *Kootznoowoo_GHG Plan_7_26_19.pdf*

			The verifiers cross checked a couple of the check cruised plot data against the final plot/tree data in the project's CO2 calculation workbook to ensure correspondence between the data sets. The datasets were found to be consistent with one another, with the check cruise data used as the final data for the quantification of on-site carbon stocks. It is noted however, that the Check Cruise workbook identifies the wrong total number of plots, and therefore the % checked value is incorrect. While the summary given in response to the issue in advance of the site visit outlines a variety of automated checks performed on the inventory data using R, the verifiers request supporting documentation demonstrating the implementation of the 3-stage QA/QC system described in the GHG Plan, including the dates of review, individuals responsible for reviews, issues identified during reviews, and a summary of revisions/updates made as a result of the QA/QC reviews.	
			Findings from Review on 21 February 2020: The verifiers were provided with a QA/QC Summary Report document outlining the details requested in the 18 August 2019 findings. This document includes the QA/QC procedures as given in the project's GHG Plan and also details the dates of the QA/QC activities, responsible individuals, identification of the key issues identified and a brief summary of the revisions and updates made as a result of the quality reviews. This information is given under both the Field Procedures & Desk Procedures sections, with specifics given under the Independent Forester Review, Technical Review and Senior Management Review sub-sections of the established QA/QC procedures. The Independent Forester Review was led by Josh Clark and supported by Liz Lott of Bluesource and implemented during June & July of 2019. A checklist detailing the aspects of the inventory data reviewed during this step in the QA/QC process is given including, plot level checks, dead/live (status) checks, DBH & Height checks, Duplicate data entry checks and various "summary" checks. Specific corrections made as a result of the issues identified by the QA/QC reviewers are outlined. The Technical Review step of the QA/QC procedures was implemented by Cakey Worthington of Bluesource over the Summer of 2019. Issues identified during this step in the QA/QC process included remnant outputs from previous model runs, and issues related to the descriptions of model prescriptions and related parameters. The final Senior Management Review step of the QA/QC procedures was implemented by Liz Lott in August 2019. Issues identified in this step were mainly related to formatting & grammatical errors in the project documentation. While the verifiers did uncover some issues that were apparently not caught during the project's QA/QC process (e.g. as outlined in this Issues Log), the requested detail	*Kootznoowoo_QAQC_Report_1_15_20.pdf* *Kootznoowoo_GHG Plan_1_31_20.pdf* *Kootznoowoo_MonitoringReport_01_31_20.pdf*

			on the QA/QC procedures has been provided, and the verifiers find no reason to further question the implementation of the established QA/QC mechanisms. Therefore this issue is considered closed.	

OPO/APD Response		
Date	***PP Comment***	***Additional evidence submitted for review by PP***
16-Aug-19	The check cruise has now been provided Kootznoowoo Check Cruise FINAL.xls. Bluesource can respond in the future with the detailed QA/QC review process. In the meantime, the following outlines automated checks in reviewing inventory data. Bluesource does many data checks on the inventory once received by the inventory crew. Kootznoowoo data was processed using R-code that does the following checks: <u>Plot-level checks</u> • Ensure that Plot ID aligns to a Plot ID in the GIS file. • Ensure that all Plot ID's in the GIS file are represented in the inventory file. <u>Dead/live checks</u> • Identify live trees that have a recorded decay class • Ensure dead trees have a decay class. • Ensure that live tree have a valid tree class. • Ensure that all trees have a valid FIA species code, valid FVS species code, and valid common name. If invalid, give the invalid code to be reviewed. <u>DBH/Height checks</u> • Check for missing/erroneous DBH measurements (erroneous meaning values outside a range of 0-large DBH). • Check for missing or erroneous total height measurement. If missing total height, ensure that inventory height is set to phantom height. • Ensure that measured height is not greater than phantom height. <u>Duplicate checks</u> • Check each plot to see if tree number is duplicated or if all the components of a tree record are duplicated (e.g., DBH, Height, Defect, Species, Status are all identical. Flag suspected duplicates for review. <u>Summary checks</u> • Print range for DBH, measured height and phantom height to ensure range is reasonable. • Print range for Top/Middle/Bottom defects to ensure that values all fall between 0%-100% • Print range and mean for computed tree defect and ensure both are reasonable. We plan to incorporate additional manual checks not yet automated in R scripts:	Kootznoowoo Check Cruise FINAL.xls

	• Review DBH/Height chart for outliers and verify questionable records. • Checks for saplings to ensure no decay class	
15-Jan-20	A QA/QC report has been added to the shared verification subfolder 'Inventory Methodology' demonstrating the implementation of the 3-stage QA/QC system described in the GHG Plan, including the dates of review, individuals responsible for reviews, issues identified during reviews, and a summary of revisions/updates made as a result of the QA/QC reviews.	Kootznoowoo_QAQC_Report_1_15_20.pdf

Verifier Issue	**Issue ID:** 19-7	**Status: Closed**	**Checked by: LH**	**Date Identified 15-Nov-19**
ACR Standard ref	**GHG Plan Section**	**Significance**	**Issue Description**	**Comments**
ACR Standard, 6.B	GHG Plan	Non conformance. *No impact on OMM.*	The required content of the GHG Plan, as outlined in Section 6.B of the ACR Standard includes "Identification and description of the Sustainable Development Goals to which the project impacts are aligned and positively contribute." This detail is currently lacking in the GHG Plan provided. The GHG Plan includes numerous references to the PP's forest management plan. In response to pre-site visit questions raised by the verifiers, the PP confirmed there is no forest management plan. References to the forest management plan should be removed throughout the project documentation. The GHG Plan also contains incorrect references to the Klawock Heenya Corporation in Section E.3.	*Kootznoowoo_GHG Plan_7_26_19.pdf*
			Findings from Review on 21 February 2020: The verifiers confirmed that all erroneous references to the Klawock Heenya Corporation have been removed throughout the updated GHG Plan. All references to the landowner's forest management plan have also been removed as appropriate. Section F of the GHG Plan, Community & Environmental Impacts, identifies the Sustainable Development Goals to which the project aligns and are considered to have a positive impact on. The asserted positive impacts that are expected to result from the project activities include Carbon sequestration, Habitat protection for wildlife, plant species, and trees in the forested communities, Water quality protection, Protection from soil erosion and degradation and Access to recreation opportunities. The verifiers agree that the project activities as described in the GHG Plan, namely forest protection and maintenance of carbon stocks should have positive impacts on these areas. Mitigation related to potential negative impacts to	*Kootznoowoo_GHG Plan_1_31_20.pdf*

			these areas aren't considered necessary, as all expected impacts are anticipated to be positive. The verifiers had initially had the impression that the intent of the ACR requirements related towards contribution to sustainable development goals were to specifically be tied with the UN Sustainable Development Goals (e.g. SDGs 1-17). However, ACR confirmed in an email communication with the verifiers on 26 February 2020 that projects should demonstrate progress towards achieving sustainable development goals on a general level, and they do not have to be specifically tied to the UN SDGs. Therefore this issue is considered closed.	

OPO/APD Response		
Date	***PP Comment***	***Additional evidence submitted for review by PP***
15-Nov-19	All references to Klawock Heenya have been removed from the GHG Plan. Section F1.4. of the GHG Plan describes how project positively contributes to Sustainable Development goals, where references to a management plan have been removed.	

Verifier Issue	**Issue ID:**	19-8	**Status:** **Closed**	**Checked by:** **LH**	**Date Identified** **15-Nov-19**
ACR Standard ref	**GHG Plan Section**	**Significance**	**Issue Description**		**Comments**
ACR Standard, 8.A	GHG Plan, F.1	Possible non conformance. *Impacts OMM.*	Section 8.A (2) of the ACR Standard requires the Environmental and Community Impact Assessment to include "Applicable laws, regulations, rules, and procedures and the associated oversight institutions." Section C.1 of the GHG Plan covers the Regulatory Surplus Test and outlines the applicable laws and regulations. The descriptions given do not however, explicitly identify the oversight institutions associated with the enforcement of the applicable laws and regulations.		*Kootznoowoo_GHG Plan_7_26_19.pdf*
			Findings from Review on 21 February 2020: The updated version of the GHG Plan provided was confirmed to now include identification of the relevant oversight institutions associated with the enforcement of the applicable laws and regulations that apply to the project. These institutions include the US Forest Service, US Environmental Protection Agency, and the Alaska Department of Natural Resources – Division of Forestry. The inclusion of these institutions in section C.1 of the GHG Plan is considered to be adequate, and this issue is therefore closed.		*Kootznoowoo_GHG Plan_1_31_20.pdf*

OPO/APD Response		
Date	***PP Comment***	***Additional evidence submitted for review by PP***

15-Jan-20	Section C.1. of the GHG Plan has been updated to reflect the appropriate oversight institutions associated with the enforcement of applicable laws and regulations.	

Verifier Issue	**Issue ID:** 19-9	**Status:** **Closed**	**Checked by:** **LH**	**Date Identified** **15-Nov-19**
ACR Standard ref	**GHG Plan Section**	**Significance**	**Issue Description**	**Comments**
ACR IFM Methodology, D.6	GHG Plan, E.3	Clarification. *May impact OMM or conformance.*	According to Section D.6 of the Methodology, if the project decreases wood product production by >5% relative to the baseline then the Project Proponent and all associated landowners must demonstrate that there is no leakage within their operations – i.e., on other lands they manage/operate outside the bounds of the ACR carbon project. The GHG Plan states that quantification of leakage is limited to market leakage, as no activity-shifting leakage is allowed by the methodology beyond de minimis levels. Klawock Heenya Corporation does not commercially harvest timber; therefore, there is no activity-shifting leakage. (note the erroneous reference to Klawock Heenya Corporation is covered in Issue 19-7). The verifiers request clarification on if all lands owned by Koottznoowoo Inc. are included in the project area boundary. If they do own additional lands outside of the project area boundary, the verifies request data showing where these lands are located, and supporting evidence demonstrating Koottznoowoo Inc. doesn't commercially harvest timber on other forestlands they own to support the assertion that activity-shifting leakage is de minimis.	*Kootznoowoo_GHG Plan_7_26_19.pdf*
			Findings from Review on 24 February 2020: The response to this issue confirms that the project area landowner, Koottznoowoo Inc. does own some additional lands outside of the project area. In addition to the project area (along with the excluded non-forested areas interior to the project area boundary), Koottznoowoo Inc. has additional forest land located on the west side of Admiralty Island to the north of the project area. A map showing the location of these lands is now included in Figure A-6 of the GHG Plan. In addition, the verifiers were provided with an email communication between Al Dreyer, President of Koottznoowoo Inc. and Liz Lott of Bluesource. In his message, Hal asserts that there is no harvesting on any forest lands owned by the Corporation. The verifiers also assessed the additional lands owned by Koottznoowoo Inc. over recent (June 2019) for any evidence of recent harvesting. The verifiers found no obvious evidence of any recent harvesting giving the verifiers reasonable assurance there is no harvesting taking place on any of their landholdings. This information	*Kootznoowoo_GHG Plan_1_31_20.pdf* *Kootznoowoo Secondary Leakage.pdf*

			supported the assertion that activity-shifting leakage is de minimis, and the issue is considered closed.	

OPO/APD Response		
Date	***PP Comment***	***Additional evidence submitted for review by PP***
15-Nov-19	Land owned by Kootznoowoo can be seen in Figure A6. An additional map showing land north of the project area also owned by the Project Proponent has also been added, and references included in section E3 of the GHG Plan. All references to Klawock Heenya have been removed from the GHG Plan. Hal Dryer President of Kootznoowoo Inc has confirmed there is no harvesting anywhere no lands owned by Kootznoowoo to support no activity-shifting leakage.	Kootznoowoo Secondary Leakage.pdf

Verifier Issue	**Issue ID:** 19-10	**Status:** **Closed**	**Checked by:** **MD/LH**	**Date Identified** **15-Aug-19**
ACR Standard ref	**GHG Plan Section**	**Significance**	**Issue Description**	**Comments**
ACR IFM Methodology, C.2, D.1	GHG Plan, E.1	Clarification. *May impact OMM or conformance.*	The verifiers request clarification on which height measure was used in the stratification analysis. The stratification scheme is understood to be based on analysis of tree height, but the verifiers found there was little difference in the average height between each strata. The verifiers also request a copy of the stratification document ("Stratification Report") referenced in the inventory methodology.	*Kootznoowoo_GHG Plan_7_26_19.pdf*
			Findings from Review on 31 October 2019: The verifiers were provided with a copy of the supporting stratification document as requested. The response to this finding indicates that tree heights from inventory plots heights were not actually used in stratification, and that rather stratification was carried out at a "polygon" level, where polygons (e.g. spatial areas) with similar forest cover was the bases for stratification, with plots being assigned to strata based on the strata of the polygon that it fell within. The stratification document provided offers additional detail on the stratification process implemented. The verifiers, however, raise the following questions and clarification requests on the stratification methods. • Why was the approach as described in Step 3.a.i taken as opposed to setting thresholds as the basis for establishing the 3 strata? • Were the five distinct fields and associated heights described in step 2.b, based on the average tree/canopy height as detected in the remote	*Kootznoowoo_GHG Plan_7_26_19.pdf* *Kootznoowoo Stratification Methodology.pdf* *Kootznoowoo_Carbon_Plot_Methodology_2_27_19.pdf*

			sending data? Or are these classifications based on maximum heights that were measured/detected? • The stratification methodology document should identify the specific remote sensing data sets used, including sources and dates of imagery. • Datasets are said to have been "processed" into polygons that were spatially defined based on similarity. Is this referring to the five distinct field and associated heights? If not, what kinds of similarities and characteristics were considered when processing the data into spatially specific polygons? • Can the LiDAR polygon data, which was the bases for the five class used in the stratification be provided? • The description given in the inventory document, regarding post-inventory stratification doesn't seem consistent with the supporting stratification methods document. The stratification document implies the 3 strata were first determined using the Lidar and Ifsar data, and once the 3 strata polygons were established, they were then overlaid with the plot spatial data to assign plots to strata. • It is the verifiers understanding that the plot data was not used in the stratification in combination with the remote sensing data.	
			<u>Findings from Review on 24 February 2020:</u> In response to the verifiers 31 October 2019 findings, they were provided responses to each of the bulleted questions raised on the stratification methods applied. Information pertaining to the stratification process was also updated in the GHG Plan accordingly. • *Why was the approach as described in Step 3.a.i taken as opposed to setting thresholds as the basis for establishing the 3 strata?* The PP explained that in the forest classification exercise applied (e.g. stratification) establishing thresholds as the basis for defining the forest strata was not considered an accurate method to distribute values from the five distinct fields (I – V) because the thresholds are selected by the algorithm (using the "kmeans" function in R), rather then being selected by hand which is considered to reduce the potential for bias, and because the technique applied is able to use all 5 IfSAR values simultaneously for grouping stands based on distribution across the 5 height classifications instead of only relying on a couple of metrics (e.g. thresholds). • *Were the five distinct fields and associated heights described in step 2.b, based on the average tree/canopy height as detected in the remote sending*	*Kootznoowoo Stratification Methodology.pdf* *Kootznoowoo_GHG Plan_1_31_20.pdf*

			data? Or are these classifications based on maximum heights that were measured/detected? The PP has clarified that the five distinct fields outlined in 2.b of the stratification document are based on the percentage of returns that occurred in each height category. • *The stratification methodology document should identify the specific remote sensing data sets used, including sources and dates of imagery.* While the Stratification document was not specifically updated to include the specific remote sensing data sets including the dates of the imagery used, the verifiers were provided with confirmation on the data sources utilized. The IFSAR (Interferometric Synthetic Aperture Radar) data was sourced from the US Department of Interior. The US GS National Geospatial Program developed the Alaska Mapping Initiative to collaborate with the State and other Federal partners to acquire 3-dimensional elevation data to improve statewide topographic mapping. Airborne3 IFSAR data were flown over South Central Alaska in the summer of 2010 and over Northwest Alaska in 2012, confirming the IFSAR data used is from the year 2010. The response also confirms that Lidar data did not cover the Kootznoowoo project area and was therefore not used in stratification. • *Datasets are said to have been "processed" into polygons that were spatially defined based on similarity. Is this referring to the five distinct field and associated heights? If not, what kinds of similarities and characteristics were considered when processing the data into spatially specific polygons?* The response confirms this information is referring to the model output of polygons that determines the polygon boundaries based on stands that had similar height characteristics. Therefore polygon boundaries are indeed based on stands that had similar height characteristics and the percent of returns that occur in each height category for a given polygon. • *Can the LiDAR polygon data, which was the bases for the five class used in the stratification be provided?* The response confirmed that the Lidar was not actually used in the project's forest stratification, and rather it relied on the IFSAR data as described. The spatial IFSAR dataset was provided and verifiers reviewed and incorporated this data into their data checks as appropriate.	

			• *The description given in the inventory document, regarding post-inventory stratification doesn't seem consistent with the supporting stratification methods document. The stratification document implies the 3 strata were first determined using the Lidar and Ifsar data, and once the 3 strata polygons were established, they were then overlaid with the plot spatial data to assign plots to strata.* The response to this item confirms that the stratification was accomplished with IfSAR data alone, then plots were assigned to strata as determined by the IfSAR stratification process. The inventory data was not used in a post-inventory stratification scheme, and rather once the 3 strata were established based on height data in the IFSAR data, plots were assigned to strata as determined by the IFSAR stratification methods. • *It is the verifiers understanding that the plot data was not used in the stratification in combination with the remote sensing data.* The PP's response confirms the verifiers understanding that plot data was not used in the stratification process as described above. The verifiers were given responses to each of their questions and clarification request which provided details to give s reasonable understanding on aspects of the stratification methods that weren't fully clear. Therefore this issue is considered closed.	

OPO/APD Response

Date	***PP Comment***	***Additional evidence submitted for review by PP***
16-Dec-19	Plot heights were <u>not</u> used in stratification. The stratification was accomplished at a polygon level, where polygons were delineated based on similar forest types. Plots were assigned to strata based on the strata of the polygon that it fell within. A "Stratification Report" has been compiled and is separately included in the response. For ease of readability, the following shows original question in italics, followed by responses as underlined: • *Why was the approach as described in Step 3.a.i taken as opposed to setting thresholds as the basis for establishing the 3 strata?* In this classification exercise, thresholds were not as accurate a method for partitioning the values from the 5 distinct values into the 3 groups. The technique described has at least 2 advantages compared to thresholds: (1) thresholds are chosen by the algorithm, not selected	Kootznoowoo Stratification Methodology.pdf *Kootznoowoo_GHG Plan_1_31_20.pdf*

by hand, which reduces the possibility of bias, and (2) the chosen technique is able to leverage all 5 IfSAR values simultaneously, in order to group stands based on height distribution across all 5 height classifications, instead of "honing in" on one or two metrics.

- *Were the five distinct fields and associated heights described in step 2.b, based on the average tree/canopy height as detected in the remote sending data? Or are these classifications based on maximum heights that were measured/detected?*

    1. The 5 distinct fields are based on the percent of returns that occur in each height category. For instance, a value of .05 for RA_Veg20 indicates that 5% of the returns were at least 20 meters or higher.

- *The stratification methodology document should identify the specific remote sensing data sets used, including sources and dates of imagery.*

    2. The IfSAR metadata can be found here: https://catalog.data.gov/dataset/interferometric-synthetic-aperture-radar-ifsar-alaska

    3. Airborne IFSAR data were flown over South Central Alaska in the summer of 2010.
    4.

    5. The Lidar data did not cover the Kootznoowoo property, so was not used.
    6.

- *Datasets are said to have been "processed" into polygons that were spatially defined based on similarity. Is this referring to the five distinct field and associated heights? If not, what kinds of similarities and characteristics were considered when processing the data into spatially specific polygons?*

    7. This is referring to the model output of polygons that determines the polygon boundaries based on stands that had similar height characteristics. So for instance, polygon ID=0 has the following outputs:

ID	RA_Veg20	RA_Veg5	RA_Veg10	RA_Veg2	RA_Veg05
0	4.6%	29.7%	23.4%	32.0%	10.2%

	• *Can the LiDAR polygon data, which was the bases for the five class used in the stratification be provided?* 8. The Lidar data actually didn't end up covering any of Kootznoowoo, so was not utilized. The IfSAR data was used as the basis for the stratification, so this polygon data has been uploaded to the strata verification folder. All mentions of LiDAR data have been removed from the stratification explanation document. • *The description given in the inventory document, regarding post-inventory stratification doesn't seem consistent with the supporting stratification methods document. The stratification document implies the 3 strata were first determined using the Lidar and Ifsar data, and once the 3 strata polygons were established, they were then overlaid with the plot spatial data to assign plots to strata.* 9. The stratification was accomplished with IfSAR data alone, then plots were assigned to strata as determined by the IfSAR stratification process. • *It is the verifiers understanding that the plot data was not used in the stratification in combination with the remote sensing data.* 10. That understanding is correct. Once the stratification process was completed using IfSAR data, plots were assigned to strata based on the polygons resulting from the High/Medium/Low stratification.	

Verifier Issue	**Issue ID:** 19-11	**Status:** **Closed**	**Checked by:** **LH**	**Date Identified** **15-Nov-19**
ACR Standard ref	**GHG Plan Section**	**Significance**	**Issue Description**	**Comments**
ACR IFM Methodology, B3	GHG Plan, A.3	New information request. *May impact conformance; no impact on OMM*	The project start date of 20 August 2018 is said to coincide with the signing of the Carbon and Marketing & Development Agreement between the Klawock Heenya Corporation and Bluesource, provided separately for verification purposes. The verifiers request a copy of the executed agreement document.	*Kootznoowoo_GHG Plan_7_26_19.pdf*
			Findings from Review on 25 February 2020: As indicated in previous issues, all erroneous references to the Klawock Heenya Corporation have been removed from the GHG Plan and supporting project documentation. The correct referenced agreement is between the Koottznoowoo Inc. and Bluesource. A redacted copy of this agreement was provided limiting the	*Kootznoowoo_GHG Plan_1_31_20.pdf* *BlueSourceAgreement 08.20.18_executed_Redacted.pdf*

			details available to the verifier. However, the date of the agreement was confirmed to be on 20 August 2018, confirming the start date applied by the project. This issue is therefore considered closed.	

OPO/APD Response		
Date	***PP Comment***	***Additional evidence submitted for review by PP***
15-Nov-19	All references to Klawock Heenya have been removed from the GHG Plan. Please see 'BlueSourceAgreement 08.20.18_executed_Redacted.pdf'	*Kootznoowoo_GHG Plan_1_31_20.pdf*

Verifier Issue	**Issue ID:**	19-12	**Status:**	**Closed**	**Checked by:**	**MD/LH**	**Date Identified**	**15-Nov-19**

ACR Standard ref	**GHG Plan Section**	**Significance**	**Issue Description**	**Comments**
ACR Standard, 5.B	GHG Plan, B.8	Possible non conformance. *No impact on OMM.*	Section 5.B of the ACR Standard requires that "Project Proponents of AFOLU projects with risk of reversal shall enter into a legally binding Reversal Risk Mitigation Agreement with ACR/Winrock that allows them to select a reversal risk mitigation mechanism and details the requirements for reporting and compensating reversals." A copy of this agreement executed between the PP's and ACR has not been provided.	*Kootznoowoo_GHG Plan_7_26_19.pdf*
			Findings from Review on 25 February 2020: In response to this issue, the PP asserts that this Risk Mitigation Agreement must be executed upon completion of the final GHG Plan, which the verifiers understand to be the point in time when ACR approves the final GHG plan and is ready to register the validated project. Therefore the verifiers determined that checking this executed agreement between the PP and ACR doesn't explicitly need to take place before their final submission to ACR, but that the verifiers will need to confirm it has been executed once ACR has reviewed & approved the project just prior to registration. This understanding was also confirmed in an email communication with ACR on 26 February 2020. Therefore the verifiers will expect to see a copy of the Reversal Risk Mitigation Agreement executed between the PP and ACR once the final GHG Plan is approved by ACR. The issue is considered closed.	

OPO/APD Response		
Date	***PP Comment***	***Additional evidence submitted for review by PP***
15-Nov-19	The Risk Mitigation Agreement must be signed upon completion of the final verified GHG Plan, which is referenced in the document. This will be sent to be signed following all other issue closing and is currently being reviewed by the Project Proponent.	*Kootznoowoo_GHG Plan_1_31_20.pdf*

Verifier Issue	**Issue ID:** 19-13	**Status: Closed**	**Checked by: LH**	**Date Identified 15-Nov-19**
ACR Standard ref	**GHG Plan Section**	**Significance**	**Issue Description**	**Comments**
ACR IFM Methodology, 3.1	GHG Plan, E.1	Clarification. *May impact OMM or conformance.*	Section 3.1 of the ACR IFM Methodology discusses that for Stocking Level Projections in the Baseline, modeling must be completed with a peer reviewed forestry model that has been calibrated for use in the project region. The GHG Plan clearly describes how the US Forest Service Forest Vegetation Simulator (FVS), Alaska variant was used. FVS is considered an acceptable growth and yield model for use in the project. FVS was said to be calibrated to the project area, and cites use of a SDIMAX value of 619 for hemlock and spruce species, instead of the default value for the FVS AK variant. A study supporting the use of this SDIMAX value has been cited. A site index of 80 was also said to be used for all strata and species. The verifiers request clarification on how the SDIMAX value of 619 was actually used to estimate site index for the model. Is the cited SDI value somehow used in FVS, and does this in some way give an estimate of SI for modeling purposes? What was the basis for applying a SI value of 80 for all strata and species in the project?	*Kootznoowoo_GHG Plan_7_26_19.pdf*
			Findings from Review on 25 February 2020: The response to this finding confirms that the cited SDIMAX value was not used by FVS for calibration or estimates of Site Index. It was explained to the verifiers that the SDIMAX parameter specifies the maximum stand density Index by species, and that it primarily affects stand mortality and is directly tied to Maximum Basal Area (BAMAX) values. The PP asserts that based on local forester knowledge, collecting and using tree core data from trees on the project area would be unreliable as much of the Kootz land was high graded in the past, and as a result much of the project area is composed of older and suppressed trees that would not provide a representative site index from cores if collected. FIA data was consulted to gauge an appropriate site index value. But was said to have shown very low site index values, which weren't considered to be indicative of actual site index. As a result, the PP relied on a recommendation from Brian Kleinhenz (Technical Consultant) with Terra Verde, to use a site index value of 80 for western hemlock, which was considered to be an appropriate average value for the overall property. This site index value also happens to be the default site index value in FVS for SE Alaska.	*Kootznoowoo_GHG Plan_1_31_20.pdf*

			While the verifiers coarse site index checks using "EVAIDator" reports from the USFS FIA online EVALIDator reporting tool gave somewhat lower site index estimates at the county level (02201 Prince of Wales), the use of the default site index value of 80 for western hemlock is considered reasonable. Western hemlock represents approximately 60% of the species composition by Basal Area found on the project area. .The verifiers are satisfied with the explanation given on the SDIMAX value and feel the site index value applied is appropriate and reasonably justified. This issue is therefore considered closed.	

OPO/APD Response		
Date	***PP Comment***	***Additional evidence submitted for review by PP***
16-Dec-19	SDIMAX is not used by FVS to calibrate or estimate Site Index. SDIMAX specifies the maximum stand density index (SDI) by species. This parameter primarily affects stand mortality and is tied directly to BAMAX (maximum basal area). The study used to support this change was based on similar stand types and similar region. The SI value of 80 was used across all stands because it is the default value in FVS. We spoke with local foresters at length on determining site index and they noted that cores would be unreliable since so much of the property was basically high graded at one point in the distant past, and the remaining trees are often old and suppressed and would not have been representative site index trees. We looked into FIA data and it showed extremely low site index values (clearly not indicative of actual site class), which is further evidence that we needed to come up with a different source of site index. Brian Kleinhenz recommended we use SI 80 for western hemlock, which was considered to be a good average value for the property, and is the default site index value for FVS SE Alaska.	*Kootznoowoo_GHG Plan_1_31_20.pdf*

Verifier Issue	**Issue ID:** 19-14	**Status: Closed**	**Checked by: LH**	**Date Identified 15-Nov-19**
ACR Standard ref	**GHG Plan Section**	**Significance**	**Issue Description**	**Comments**
ACR IFM Methodology, C.5	ERT Calculation Workbook	Non conformance. *May impact OMM or conformance.*	In the ERT Calculation Workbook, ACR_IFM_ERT_Calcs tab, for the calculation of baseline uncertainty in accounting years 2019 and beyond, the calculation appears to be calculating project and baseline uncertainty using the 2018 values, rather than current year values. It is also noted that the Uncertainty values for live and dead stocks in the ERT Calculation Workbooks do not appear to have been updated following revisions made to the CO2 Calculation Workbook in response to pre-site visit issues raised by the verifiers. See also Issue 19-20 related to necessary updates to the ERT calculation workbook and GHG Plan.	*Kootznoowoo_RP_ERT_HWP_7_22_19.xlsx*
			Findings from Review on 26 February 2020: The verifiers were able to confirm that the Uncertainty values for live and dead stocks in the ERT Calculation Workbook have now been updated following earlier revisions made and are now consistent between the Start RP and ERT HWP	*Kootznoowoo_RP_ERT_HWP_01_31_20.xlsx* *Kootznoowoo_Start_RP_CO2_01_31_20.xlsx* *Kootznoowoo_GHG Plan_1_31_20.pdf*

			workbooks. These correct Uncertainty values are also entered in Section E.4 of the updated GHG Plan. In the ERT Calculation Workbook, ACR_IFM_ERT_Calcs tab, for the calculation of baseline uncertainty in accounting years 2019 and beyond, the calculation still appears to be calculating project and baseline uncertainty using the 2018 values, rather than current year values. This issue is related to the calculations performed in excel row 25 for uncertainty in baseline CO2 stocks. For example, when calculating baseline uncertainty for year 2019, the workbook is pulling baseline values from year 2018 in column D. when calculating baseline uncertainty for 2020, 2021 etc., the workbook continues to pull baseline values from year 2018 in column D, rather than from the baseline values applicable year in the corresponding column.	
			Findings from Review on 24 March 2020: The verifiers concur with the PP's response. In the Estimation of Baseline Uncertainty section of the IFM methodology applied by the project (section C5), it states; "The uncertainty in the baseline scenario should be defined as the square root of the summed errors in each of the measured pools. For modeled results use the confidence interval of the input inventory data." In recognition of this, the verifiers found that the calculation of baseline uncertainty in accounting years 2019 and beyond is calculated correctly in accordance with the methodology. This issue is therefore considered closed.	*Kootznoowoo_RP_ERT_HWP_03_20_20.xlsx* *Kootznoowoo_Start_RP_CO2_01_31_20.xlsx* *Kootznoowoo_GHG Plan_3_20_20.pdf*

OPO/APD Response		
Date	***PP Comment***	***Additional evidence submitted for review by PP***
15-Nov-19	The uncertainty values in cells D2 and D3 of the ACR_IFM_ERT_Calcs tab are from the Stats_RP tab of the CO2 calcs file and have been updated accordingly.	
3/20/20	The equation on page 27 of the Methodology indicates that the percentage uncertainty in the combined carbon stocks in the baseline should be based on the initial inventory in year 1, and doesn't change over time calculated at year *t* like it does in the with-project uncertainty. As such no changes have been made.	

Verifier Issue	**Issue ID:**	19-15	**Status:** **Closed**	**Checked by:** **LH**	**Date Identified** **15-Nov-19**
ACR Standard ref	**GHG Plan Section**	**Significance**	**Issue Description**		**Comments**

ACR IFM Methodology, G	CO2 Calculation Workbook	Possible non conformance. *May impact OMM or conformance.*	The verifiers note that on the Stats_RP tab of the CO2 Calculation Workbook the pivot tables showing Live, Total and AG CO2 stocking for the project appear to be the same with identical values. It is not clear why the stocking values are the same in these pivot tables.	*Kootznoowoo_Start_RP_CO2_8_16_19.xlsx*
			Findings from Review on 26 February 2020: The verifiers have confirmed that the previously identified issue where on the Stats_RP tab of the CO2 Calculation Workbook the pivot tables showing Live, Total and AG CO2 stocking for the project appear to be the same with identical values, has been addressed. The total and AG stock values have been corrected. The associated verifier data checks have been updated accordingly. The VVB's internal independent calculations of the project's total carbon stocks are within 1,555 t CO2e of the PP's calculation, or an approximate 0.06% difference. This issue is therefore considered closed.	*Kootznoowoo_RP_ERT_HWP_01_31_20.xlsx* *Kootznoowoo_Start_RP_CO2_01_31_20.xlsx* *Kootznoowoo_GHG Plan_1_31_20.pdf*

OPO/APD Response		
Date	***PP Comment***	***Additional evidence submitted for review by PP***
16-Dec-19	This identified issue of identical values was an error in the spreadsheet. The error has been updated, and the error has been corrected for Total Standing CO2e and AG live sound CO2e (Stats_RP tab). The Issue identified in ACR_IFM_ERT_Calcs was also identified as an issue and updated in the spreadsheet.	Kootznoowoo_Start_RP_CO2_01_31_20.xls

Verifier Issue	**Issue ID:** 19-16	**Status: Closed**	**Checked by: LH**	**Date Identified 15-Nov-19**

ACR Standard ref	**GHG Plan Section**	**Significance**	**Issue Description**	**Comments**
ACR Standard, 4.A.3	OPDR Calculation Workbook	Non conformance. *Impacts OMM.*	To meet the Implementation Barrier Test, the PP has elected to implement a Financial NPV analysis, to show there are financial barriers to implementation of the project activities. The analysis as provided, shows the NPV of the baseline scenario to be significantly higher than that of revenue from the project activities. The ACR Standard states; "Financial Barriers include high costs, limited access to capital, or an internal rate of return in the absence of carbon revenues that is lower than the project proponent's established and documented minimum acceptable rate." While the financial analysis as shown demonstrates the baseline is more profitable than that of the project scenario, is the rate of return in absence of carbon revenue (e.g. baseline) lower than the PP's minimal accepted rate? What is the PP's minimal accepted rate? Is this established and documented as required to prove there is truly a financial barrier?	*Kootznoowoo_RP_ERT_HWP_7_22_19.xlsx* *Kootznoowoo_GHG Plan_7_26_19.pdf*

			Regarding the Baseline cash flow analysis, there isn't any detail on where the annual timber revenues come from? What timber price assumptions were applied in the analysis? Do the timber volumes from the baseline harvest correlate to the timber revenues in the analysis? The analysis doesn't appear to include any costs associated with revenue generation from timber harvesting. The analysis include all relevant costs as well as revenues and offer supporting justification for all cost and revenue assumptions applied. Regarding the Project cash flow analysis, what is the basis for using a price of $8/credit for the carbon revenue figures? The analysis doesn't appear to include any costs associated with revenue generation from carbon sequestration. What about project development, implementation, monitoring, verification and transactional costs? The analysis include all relevant costs as well as revenues and offer supporting justification for all cost and revenue assumptions applied. Further, it is also noted that regarding the Implementation Barrier Test, the ACR Standard states "Generally, there are no barriers to the continuation of current activities, exceptions being regulatory or market changes that force a shift in a project activity or the end of equipment's useful lifetime." Based on the historical land use descriptions given in the GHG Plan, it appears there hasn't been any commercial harvesting on the Kootz ownership since the 1990s. The verifiers therefore question the demonstration of a barrier for the continuation of this "hands off" management approach when this is what the PP has been doing for the past 20 years.	
			Findings from Review on 6 March 2020: The response to this issue asserts that the overall mission of Koottznoowoo Inc. as a native corporation is to maximize profits for their shareholders. Koottznoowoo Inc. determined that in order to do maximize profits for the corporation, they could no longer rely on timber harvesting, so alternatives to achieve new capital have been sought by the recently hired president of the corporation, Hal Dryer, which ultimately lead to the development of the ACR IFM project. A Financial Attestation document signed by Mr. Dryer on 31 January 2020 was provided describing the nature of the Koottznoowoo Inc. corporation and their need to raise financial capital as supporting evidence to demonstrate there are true financial barriers for the implementation of the project activities. As described in the Financial Attestation document, Alaska Native Corporations (ANCs) are strictly monitored and regulated by the State of Alaska Division of Banking & Securities. This document also asserts that the intent of "Village" corporations such as Koottznoowoo Inc. (managed by regional ANC corporations), is to act as a	*Kootznoowoo Financial Attestation.pdf* *Kootz_SoutheastAlaska_Cost_Value_12_13_19.xlsx* *Kootznoowoo_100Yr_Calcs_01_31_20.xlsx* *Kootznoowoo_RP_ERT_HWP_01_31_20.xlsx* *20191205-FT-EM-SOVCM-2019-Report-MarketOverview-web.pdf* *Kootznoowoo_GHG Plan_1_31_20.pdf*

			for-profit entity that distributes revenues to their shareholders. The document highlights some key differences between ANCs and typical publicly traded corporations including among other differences; that the shares of ANCs can only be owned by native persons and the fact that the shares cannot be bought or sold. Koottznoowoo Inc. is made up of around 1,100 shareholders, all of whom have an interest in seeing the corporation generate a profit to ensure their individual distributions. In the document, Mr. Dryer then goes on to state that Koottznoowoo Inc. was profitable until the late 1990s, but since then, they have not found other ventures that would replace previously existing revenue streams resulting from timber harvesting. Therefore, Koottznoowoo Inc. has sought alternative ways to generate meaningful revenues to create working capital for the corporation and its shareholders. The Attestation also describes how Koottznoowoo Inc. has sought to generate revenue through capitalizing on the Small Business Administration's 8a program, which provides opportunities for small businesses owned by socially and economically disadvantaged people or entities. Koottznoowoo Inc. has engaged in some federal projects through the 8a program, but they have found that even these projects have required a significant amount of working capital, that the corporation has not been able to support. As a result, they see having a good, solid working capital as the means to achieving the goals of the corporation, and that revenues from carbon markets as a mechanism to overcome this challenge. The Financial Attestation provided is found to generally support the forest owner's limited access to capital and that this represents a financial barrier to the project activities. Based on the verifiers' observations of project area's forest structure, largely composed of younger secondary growth as a result of historic harvesting, it is reasonable to understand the proponent's claim that timber harvesting is not currently a viable option for generating sufficient revenue for the native corporation. Therefore, considering these factors, and the need to raise working capital to fulfill the mission of the organization, the verifiers are reasonably assured the project has met the financial barrier test. Information pertaining to the price and cost assumptions related to timber revenues have been provided. The cost and price values were consolidated from the USDA Forest Service Region 10 valuation program. Links to the source of the cost data are given and checked by the verifiers. While the total cost estimates appear to include all relevant costs, the bases for the underlying assumptions for determining the individual cost categories aren't entirely clear. For example, in regard to equipment mobilization, the costs appear to be based on no barge being required (e.g. for timber transport), but as far as the verifiers are aware, there is not an established road network that could get timber to market without use of a barge. While the	

			verifiers considered the data sources used for the cost assumptions as appropriate, an explanation of, and justification for the underlying assumptions for determining the specific costs seems warranted. The timber pricing values applied in the financial analysis, and the source of this data were checked by the verifiers. Only the most recent pricing values from the USDA Forest Service Region 10 valuation program (Official RV Appraisal Update Bulletin Feb 5, 2020) could be found by the verifiers, but the pricing values in this publication appear to be comparable to the values applied by the proponent, which were based on 2019 values, (average of 4 quarters up to 2019 Q2). What is not clear to the verifiers is where the sawtimber prices ($ per MBF) actually get applied to the harvest volume projections for the calculation of harvested sawlog revenues (within the Baseline tab of the 100 Yr Calc workbook) that feed into the NPV analysis. The verifiers suggest the details of these underlying cost assumptions and questions related to the calculation of sawlog revenues used in the NPV analysis are discussed during the baseline model review call, as this information is all tied into baseline harvesting modeling. The response to this issue states that the project (e.g. with project scenario) in the ERT Calculation worksheet was updated to include the relevant costs associated with revenue generation from carbon sequestration and implementation of the project activities. Carbon offset pricing information is said to have been updated based on the most recent Ecosystem Marketplace report. The verifiers however do not see these revisions made to the project cash flow analysis within the ERT HWP Calculation workbook. The carbon price (per t CO2e) remains at $8, and it is not clear where the relevant costs associated with the "with-project" activities were actually included in the project cash flow analysis.	
			Findings from Review on 30 March 2020: As acknowledged in response to the verifier's 6 March 2020 findings, incorrect information was provided in the January 2020 submission of project document files as it related to the Implementation Barrier test and the presentation of Financial Barriers faced by the project proponent. The updated file submission received on 20 March 2020 is said to include the files that were intended to have been provided previously. The verifiers also discussed some of the underlying price and cost assumptions during the baseline model review call held on 19 March 2020. The updated/correct version of the project's cost value workbook, include summary information on the assumptions that went into each cost category. For example, as it relates to equipment mobilization, assumptions for round trip distances (miles) are given, and for logging costs, harvest systems assumed to be applied in timber	*Kootz_SoutheastAlaska_Cost_Value_3_20_20.xlsx* *Kootznoowoo_100Yr_Calcs_3_20_20.xlsx* *Kootznoowoo_RP_ERT_HWP_03_20_20.xlsx*

			operations are specified. The verifiers downloaded the Cost Calculator from the USDA Forest Service Timber Valuation Program, referenced in the PP's Cost Value workbook and attempted to reproduce the various cost estimates ($/MBF) applied in the project's financial analysis. While identical costs were not reproduced, only the current data from the source was/is available. The VB however found similar costs for each operational expense, and found the overall costs applied in the analysis to be reasonable. The VB's estimate based on the referenced source data for the the total cost estimate was approximately $23/MBF more than the PP's estimate applied in the financial analysis. The verifier found the cost assumptions applied in the financial analysis to be reasonable and supported by the various data checks performed as outlined in their Data Check Log. The verifiers also reviewed the updated "with project" cash flow analysis provided that now includes the correct information intended to be applied. All relevant costs associated with implementation of the project activities and monetizing carbon offset revenue generated as a result of the project activities is now in the analysis and includes, forest inventory expenses, stratification (original one time expense), project verification, registry fees, deductions to the ACR pooled buffer account, and carbon offset prices. The carbon price applied ($3.2/t CO2e) was confirmed to be sourced from the most recent (2019) Ecosystems Marketplace report. The cost assumptions related to the project activities were found to be comprehensive and reasonable based on the verifiers professional experience in carbon offset projects and carbon markets in general. The verifiers data checks of the financial analysis were able to confirm the NPV calculations for the baseline scenario and project activities (20 year period). Various sensitivity analysis were performed on both baseline and project NPV analysis. The projected baseline harvest scenario clearly shows a significantly higher NPV over a 20 year period compared to the with project scenario. While identical costs were not reproduced, only the current data from the source was/is available. Net baseline timber revenue can decrease by 50% and net project carbon offset revenue can increase by 50% and the resulting NPVs show that the baseline scenario, and associated revenue from timber harvesting is still more financially viable than the with project scenario. Application of the timber prices applied in the analysis were confirmed to take place in their "R" analysis, with timber prices included in the R_code files that are imported into the analysis. Based on the supporting information provided, the verifiers are reasonably assured the project meets the Implementation Barriers Test, and found there are financial barriers faced by the project proponent, primarily limited access to capital. The verifiers found the proponent's NPV analysis to be accurate, with general support for	

			the underlying revenue and cost assumptions. Therefore this issue is considered closed.	

OPO/APD Response		
Date	***PP Comment***	***Additional evidence submitted for review by PP***
15-Nov-19	Kootznoowoo has a long history of timber management, and though it has been hands-off based on past harvest rotations since the late 90s, their overall mission as a native corporation is to maximize profits for their shareholders. In order to do so, they can no longer continue not harvesting. They have hired president Hal Dryer in recent years in order to re-consider ways in which to achieve new capital, which has led them to initiate the carbon project. Please see the 'Kootznoowoo Financial Attestation' which describes their need to raise capital, which meets the financial barrier of 'limited access to capital'. All assumptions about timber prices and harvesting costs can be found in the Kootz_SoutheastAlaska_Cost_Value file in the RegionalForestryDocs verification folder. The pricing assumptions can be found in rows 80-82 of the "R10 cost and value appraisal" tab. Underneath the price table a link can be found to the report. Please note that the link will only show the most up-to-date Appraisal Program and Bulletin. The expected project financial in the ERT calculation worksheet have been updated to include all project expenses including registry fees, verification, and inventory costs as well as the portion of net proceeds going to Bluesource. The credit price was based updated to $3.2 to reflect the most recent Ecosystem Marketplace places reported in 2018 (20191205-FT-EM-SOVCM-2019-Report-MarketOverview-web.pdf). We have not pre-sold any credits from this project to indicate an exact carbon price.	Kootznoowoo Financial Attestation.pdf 20191205-FT-EM-SOVCM-2019-Report-MarketOverview-web.pdf Kootznoowoo_GHG Plan_1_31_20.pdf
3/20/20	The harvesting costs were accidently used from a different project. Kootznoowoo would need to barge to a centralized sort yard on South Prince of Whales Island (30 miles). The Kootz_SoutheastAlaska_Cost_Value_3_20_20.xls file has been updated to reflect these costs, and the new harvest cost of $473 per MBF has been applied in the baseline. The timber prices can be found in Calcs & Model\R_Code\import and are applied in the ProcessFVSoutput.R code. The credit price was based updated to $3.20 to reflect the most recent Ecosystem Marketplace places reported in 2018.	Kootznoowoo_RP_ERT_HWP_03_20_20.xls Kootz_SoutheastAlaska_Cost_Value_3_20_20.xls

Verifier Issue	**Issue ID:**	19-17	**Status:**	**Closed**	**Checked by:**	**LH**	**Date Identified**	**15-Nov-19**

ACR Standard ref	**GHG Plan Section**	**Significance**	**Issue Description**	**Comments**

ACR Standard, 4.A.2	GHG Plan, C.2	Possible non conformance. *No impact on OMM.*	The text in section C2 of the GHG Plan regarding common practice, doesn't adequately define what are considered the common practice forest management practices in the region where the project area is located. The common practice forest management approach in the region should be clearly defined. This section of the GHG Plan reiterates that there are no regulations that would prohibit the baseline harvest regime from being implemented, but these points are really more related to the Regulatory Surplus Test. A description is given on historic management practices in the region but does not describe current practices or trends. It appears that there has been no harvesting on the Koottznoowoo Inc. ownership since the 1990s, so the verifiers question why the baseline harvest regime would be considered common practice when no harvesting has taken place for the past 20 years. Are there any current examples of what is considered to be common practice management taking place in the region that can be provided? What information and data is being used as the basis to determine the common practice management in the region? It is not clear if the PP has actually evaluated the predominate practices in the region/sector to determine the degree in which the practices have penetrated the market to demonstrate the project activities aren't common practice. Rather, the argument given appears to describe how the PP could feasibly implement the baseline harvest regime, but sufficient support that the baseline is indeed common practice is lacking. Conversely, can it be shown that implementation of the project activities and related forest management is not common practice in the region? The verifiers note there are several other forest carbon projects being developed/implemented in the region, so there is some evidence that the project activities aren't entirely uncommon, which in a way suggests the baseline isn't necessarily common practice management.	*Kootznoowoo_GHG Plan_7_26_19.pdf*
			<u>Findings from Review on 27 February 2020:</u> While the text in the Common Practice Test section (C.2) of the GHG Plan doesn't appear to have been revised in response to this issue, the verifiers now note that section B.5 of the document does provide a reasonable definition of the baseline harvest scenario, which the PP asserts is the common practice harvesting regime in the region for similar types of landowners. The common practice baseline scenario "represents an aggressive industrial harvest regime, targeted to maximize net present value at a 6% discount rate (for private industrial forestlands) typical of ca. 2018 practices in the project region on Alaska Native Corporation lands. Baseline practices involve pre-commercial thinning on overstocked second growth stands while simultaneously harvesting merchantable timber on old growth stands. Final	*Kootznoowoo_GHG Plan_7_26_19.pdf*

			harvest for the baseline was modeled for when the stand reached 12,000 BF, with an intermediate round of pre-commercial thinning at 15 years." The verifiers were provided with an explanation of common practice silviculture in the region, cited from Brian Kleinhenz VP of Operations with Terra Verde. Brian has over 15 years of forestry experience in Alaska, including working with Native Corporations and their forest management operations. The cited text given, supports the common practice baseline harvesting defined in the GHG Plan, and asserts that Even-aged (clear-cut) harvest, natural regeneration and Pre-commercial thinning in that order and combination is by far the most common silvicultural practiced in Southeast Alaska. Brian also indicates that this type of harvesting regime is commonly used by the USFS on most of the young growth timber they manage, and that this management approach is also used by other Native Corporations in the region, including the largest private landowner in the region, Sealaska. The verifiers are familiar with Brian, have worked with him on other project's throughout Southeast Alaska, and consider his opinions on this matter as well informed. The cited explanation of common practice harvesting in the region suggests the defined baseline harvest scenario is indeed common practice in the region, and that this type of management is being applied by both public landowners (e.g. USFS) and private landowners including other Native Corporations. Contact information for individuals with the USFS were provided and the verifier subsequently interviewed these individuals to seek confirmation on the asserted definition of common practice defined in the baseline. The verifiers have also visually observed this type of harvesting on other native corporation lands throughout their working experience in Southeast Alaska. The verifiers interviewed a variety of stakeholders to gain a better understanding of common practice management and harvesting practices in the region. Through these interviews, overall support for the common practice baseline harvesting regime as described in the GHG Plan was communicated to the verifier and was consistent with the explanation given by Brian Kleinhenz. The verifiers also conducted internet searches for information pertaining to common silvicultural practices in Southeast Alaska. Through these investigations the verifiers were able to find some research articles that gave general support for the defined baseline scenario as representing common practice harvesting methods in the region. Refer to the "Common Practice Test" tab of the verifiers Data Check Log. The verifiers are reasonably assured that the project, and associated project activities, in which there is no current or future commercial harvesting exceed common practice in the timber industry in southeast Alaska, including private lands held by Native Corporations. While the verifiers feel that the PP did not respond	

			directly to some of the questions raised in this issue, through their additional investigations, the verifiers are reasonably assured that the defined baseline scenario represents common practice silviculture practiced in the region. Therefore this issue is considered closed.	

OPO/APD Response		
Date	***PP Comment***	***Additional evidence submitted for review by PP***
15-Nov-19	We consulted with Brian Kleinhenz, who has many years of experience with harvesting in the region for private landowners, to determine our common practice silviculture implemented in the baseline modeling. He provided the following explanation of the common practices in the area: **Regarding common practice:** Even-age (clear-cut) harvest, natural regeneration and Pre-commercial thinning in that order and combination is by far most common silviculture practiced in Southeast Alaska. The USFS has used this regime on most of the young growth it manages. The verifier could reach out to the Tongass Young Growth Coordinator, Mike Sheets, for confirmation of common management. I have provided his contact below. Clear cuts and pre-commercial thinning is also commonly practiced on private lands owned and managed by native corporations. The largest private landowner in the region, Sealaska, clear cuts and PCT treats over 1,000 acres per year. They have Forest Management plans in place that show the plan and schedule. Kootznoowoo themselves have an active PCT program that they are conducting with the assistance of the NRCS EQIP program. The verifier can reach out to the NRCS file office in Juneau (Samia Savell) for confirmation that PCT is a common practice that they help Native Corporations implement. There is also precedent for very large PCT programs on Native Corporation land. Individual PCT project over 1,000 acres are fairly common. In addition to all of this, there is a GIS layer that I can get hold of that shows all the harvest in Southeast Alaska, the date of harvest and the date of PCT. It is a bit out of date but may help. Robert "Mike" Sheet (Tongass Young Growth Coordinator) robert.sheets@usda.gov Samia Savell (NRCS Conservationist) samia.savell@ak.usda.gov	*Kootznoowoo_GHG Plan_1_31_20.pdf*

Verifier Issue	**Issue ID:** 19-18	**Status:** **Closed**	**Checked by:** **LH**	**Date Identified** **15-Nov-19**

ACR Standard ref	**GHG Plan Section**	**Significance**	**Issue Description**	**Comments**
ACR Standard, 4.A.1	GHG Plan, C.1	Possible non conformance. *May impact OMM or conformance.*	The laws and regulations outlined in Section C1 of the GHG plan appear to comprehensively identify the applicable laws that could affect the project. The verifiers assessment of these laws finds that none of them impact the project	*Kootznoowoo_GHG Plan_7_26_19.pdf*

			activities as described, nor require the PP to implement the project activities, thereby demonstrating regulatory surplus. The information presented to demonstrate conformance with the Regulatory Surplus Test seems to only assess the applicable legal frameworks that affect the project activities but does not appear to address the baseline. The verifiers question if the discussion in this section should explicitly address the affects applicable laws and regulations have on both the project and baseline of the project. Regarding the Federal CWA, it indicates that section 518 causes the CWA be N/A for the PP. The verifiers interpret this section of the CWA, however, to be specific Native American Tribes with sovereign territories, whereas ownership by Koottznoowoo Inc. is essentially considered to be under the private ownership category. The Federal ESA is said to be N/A, but the discussion cites a section that is related to "takes" for subsistence purposes. This seems outside of the scope of the project activities. While the verifiers don't consider there to be any activities that represent a "take" in either the project or baseline scenario, they would consider the ESA in itself to be applicable. Text in Section A6 of the GHG Plan how the project lands do not face any restrictions or easements, with the exception of the Bald Eagle Protection Act, and AK BMPs related to buffer establishment around Anadromous streams. This text seems inconsistent with that given in Section C.1, where it indicates there are no applicable laws or regulations that affect the project or baseline activities. The Bald Eagle Protection Act isn't even mentioned in Section C.1, and the verifiers would consider this act, and related buffer requirements around nesting sites to be applicable. The verifiers also consider AK BMPs to be applicable to Native Corporation lands such as the project area owned by Koottznoowoo Inc. Section C.1 of the GHG Plan described the Alaska Forest Resources and Practices Act as non-applicable. It is the verifier's understanding that described the Alaska Forest Resources and Practices Act is applicable to native corporations, since they are essentially considered private landowners. In summary, based on the verifiers experience working in the state of Alaska, Federal State laws and regulations that affect forest management and timber harvesting are relevant to Native Corporations, as their lands are effectively considered to be private ownership. While the verifiers find that these laws and regulations do not require the PP to implement the project activities, they may influence the projected baseline scenario and should be incorporated into the design of the project's baseline harvest scenario.	

			Reference to an Attestation related to regulatory compliance is given in section III.4 of the MR, but this attestation has not been provided.	
			<u>Findings from Review on 27 February 2020:</u> Section C.1 of the GHG Plan has been updated in response to this finding. At the federal regulatory level, the GHG Plan now recognizes the applicability of the CWA, the ESA, the Bald and Golden Eagle Protection Act, the Alaska National Interest Lands Conservation Act and the Logger's Guide to the New OSHA Logging Safety Standards. At the State regulatory level, the GHG Plan now indicates the Alaska Forest Resources and Practices Act as applicable. The applicability of these regulations on the project activities is understood to be correct by the verifiers. As indicated in the original findings, the verifiers assessment of these laws found that none of them impact the project activities as described, nor require the PP to implement the project activities, thereby demonstrating regulatory surplus. A signed copy of the Attestation of Regulatory Compliance as cited in the Monitoring Report has now been provided. The document, signed by Hal Dreyer, President of Koottznoowoo Inc. on 31 January 2020 certifies that the project has remained in full regulatory compliance and has had no violations or other instances of noncompliance with laws and regulations, or other legally binding mandates related to the project activities. As indicated in the verifier's original findings, the information presented to demonstrate conformance with the Regulatory Surplus Test seems to only assess the applicable legal frameworks that affect the project activities but does not appear to address the baseline. This element of this finding doesn't appear to be addressed in the response provided or in the updated GHG Plan. Section 4.A.1 of the ACR Standard states; "The regulatory surplus test requires the Project Proponent to evaluate existing laws, regulations, statues, legal rulings, or other regulatory frameworks that directly or indirectly affect GHG emissions associated with a project action or its baseline candidates, and which require technical, performance, or management actions." The applicable regulatory framework and its influence on the project baseline still isn't explicitly addressed in the GHG Plan. The verifiers request clear documentation on how the applicable regulatory framework has been incorporated into the projects baseline scenario. In regard to the Bald and Golden Eagle Protection Act, the GHG Plan states; "there are no buffer requirements around bald eagle nesting sites, though loggers may not harvest a tree with an active nest. Additional requirements mandate that built infrastructure may not be located within 330 ft. of all active and inactive nests."	*Kootznoowoo- Attestation of Regulatory Compliance.pdf* *Kootznoowoo_GHG Plan_1_31_20.pdf* *Kootznoowoo_MonitoringReport_01_31_20.pdf*

			It is the verifiers understanding that the Eagle Act prohibits anyone from taking bald eagles, and that among other actions, "take" includes disturbance of bald eagles. The USFWS has developed the National Bald Eagle Management Guidelines. Category C of these Guidelines applies to timber operations and forestry practices and describes to "avoid clear cutting or removal of overstory trees within 330 feet of the nest at any time." The description of applicability of the Eagle Act given in the GHG Plan is not consistent with the verifiers understanding, and detail on how the Act has been incorporated into the baseline model is lacking. In addition, the verifiers question if Best Management Practices (BMPs) for Timber Harvest Operations as applicable under the Alaska Forest Resources and Practices Act should be incorporated into the Regulatory Surplus section of the GHG Plan, and request clarification on how BMPs have been incorporated into the projects baseline scenario.	
			<u>Findings from Review on 24 March 2020</u> Section C.1 of the GHG Plan has been updated and now includes language specifying that the applicable laws and regulations and their effect on forest management practices on the project area have been taken into consideration for both the project and baseline activities. This section of the GHG Plan is now explicitly clear that all applicable laws and regulations were incorporated into the baseline model. The primary constraint incorporated into the baseline model is the required 66 foot buffer surrounding anadromous streams required under the Alaska Forest Resources and Practices Act. Within these required buffer areas surrounding anadromous streams, a "grow" prescription is applied in the baseline model, where no harvesting or silvicultural treatment is applied to these constrained acres corresponding to delineated riparian management areas (RMZs). Spatial data for the established RMZs identified in the project area was provided. In total there are 91.5 acres of RMZs in the project area that are constrained to the "grow" prescription in the baseline model. The verifiers compared these constrained RMZ areas against the Anadromous Waters Catalog (AWC) layer for Southeast Alaska obtained through the Alaska Department of Fish and Game website. The verifiers understand this AWC layer to be the official spatial data identifying the anadromous waterbodies that require the 66 foot buffer under the Alaska Forest Resources and Practices Act. All anadromous water bodies in the AWC layer coincident with the project area were confirmed to be either excluded from the project area or buffered by the RMZ layer on 66 feet on either side of the AWC feature. With regard to BMPs, the response cites confirmation from Brian Kleinhenz, the PP's technical consultant, who asserts that the only BMPs that are required by law are 66'	*Kootznoowoo_GHG Plan_3_20_20.pdf* *Kootz_RMZ_06_18_19.shp* *Egales.msg*

			buffers around anadromous fish bearing streams (e.g. Type I-A & Type I-B). This is the verifiers understanding as well based on previous verification work performed on other projects located in the state of Alaska. While Alaska BMPs do discuss restrictions related to road construction on non-anadromous streams (e.g. Type I-C & Type I-D), they do not explicitly restrict timber harvesting in such non-fish bearing streams, and therefore do not impact baseline harvesting. BMPs are however now, included in the description of legal constraints in the Regulatory Surplus section of the GHG Plan. Additional detail is included in the updated GHG Plan regarding the Bald and Golden Eagle Protection Act. The PP now acknowledges that the associated guidelines of the Eagle Act specify a 330 foot radius special management buffer around trees with active nests, but assert the buffer is not mandatory. According to citation from the PP's technical consultant (Brian Kleinhenz), some private landowners in SE Alaska voluntarily implemented this guidance to mean no timber harvest, road construction or other activities may occur within this 330' zone, while others have harvested timber within the 330' radius zone by implementing practices that will not disturb the nest tree itself. This is essentially consistent with the verifiers understanding, and that the National Bald Eagle Management Guidelines aren't explicitly required by law. Further, it is the verifiers understanding that in practice, when a logging operation is laid out, nesting sites are spatially located prior to harvesting, and buffer zones are delineated and/or decisions are made on how to harvest timber without impacting the nest. The verifiers aren't aware that specific spatial data on Bald Eagle nesting locations are specifically in place on the Koottznoowoo Inc. ownership, and are reasonably assured additional constraints to baseline harvesting aren't specifically needed to address the Eagle Act. The GHG Plan was found to now describe consideration of applicable laws and regulations in both the project and baseline activities. Applicable legal constraints were found to be adequately incorporated into the modeled baseline harvest scenario, and the verifiers are reasonably assured all applicable laws and regulations have been considered in addressing the Regulatory Surplus Test. This issue is therefore considered closed.	

OPO/APD Response

Date	*PP Comment*	*Additional evidence submitted for review by PP*
15-Nov-19	Section C.1 of the GHG Plan described the Alaska Forest Resources and Practices Act has been changed from NA to stating it is applicable to the project. The AK FRPA defines Alaska's BMPs, which include 66ft buffer surrounding anadromous streams, which have been already applied and constrained to the model but incorrectly referenced in the GHG Plan. The Federal CWA and ESA have been changed to applicable. The Bald and Golden Eagle Protection Act has been added with clarifying language on its impact on harvesting. Only Bald Eagles are listed as	Kootznoowoo- Attestation of Regulatory Compliance.pdf *Kootznoowoo_GHG Plan_1_31_20.pdf*

	"Threatened". Private landowners are not able to harvest a tree with an active nest, but there is no mandatory buffer requirement. As a result, no harvesting constraints for Bald Eagles have been modeled into the baseline. The regulatory compliance attestation has now been provided.	
3/20/20	We contacted Brian Kleinhenz to elaborate on the treatment of Bald Eagle nests and he provided the following additional details: "The Bald Eagle has a very special status due to its important traditional cultural values. It also enjoys protection under the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668c), enacted in 1940, as amended. This law prohibits anyone, without a permit issued by the Secretary of the Interior, from "taking" bald eagles, including their parts, nests, or eggs. The Act defines "take" as "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb. "Disturb" means: "to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, 1) injury to an eagle, 2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or 3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior." The Act provides for criminal penalties for violations. The USF&WS is authorized to enforce and manage Bald Eagles and in the early 1980's the forest industry, ANCs and others joined with USF&WS to create an industry standard that would protect Bald Eagle nest trees from disturbance in timber harvest areas. This standard establishes a 330' radius special management zone around each nest that within which harvest activities are restricted to minimize disturbance. Certain private landowners in SE Alaska voluntarily implemented this to mean no timber harvest, road construction or other activities may occur within this 330' zone if prudently avoidable. Other landowners have harvested timber within the 330' radius zone by implementing practices that will not disturb the nest tree itself. USF&WS maintains a records of nest tree locations. Trees are added and removed from the listing as eagles move around on the landscape. " Brian also confirmed that the only BMPs that are required by law are 66' buffers around any streams capable of supporting fish habitat. All other BMPs are seasonal timing restrictions, such as the timing of building roads, but none that would impact modeling. Language has been added to Section C1 of the GHG Plan to describe the laws and regulations applicable to the baseline to demonstrate how the baseline, in addition to the project activities, demonstrates regulatory surplus, citing the description above.	*Kootznoowoo_GHG Plan_3_20_20.pdf*

Verifier Issue	**Issue ID:**	19-19	**Status:**	**Closed**	**Checked by:**	**LH**	**Date Identified**	**15-Nov-19**	

ACR Standard ref	GHG Plan Section	Significance	Issue Description	Comments
ACR Standard, 8.B	GHG Plan, D.2 Monitoring Report, III.4	Non conformance. *No impact on OMM.*	In Section G.2 of the GHG Plan, it indicates that; Each year, the Project Proponent shall submit a signed Attestation that: • Confirms the continuance of project activities; • Confirms that ownership remains clear and uncontested; • Discloses any negative environmental or community impacts or claims of negative environmental and community impacts, and documents plans to mitigate any reported negative environmental or community impacts; • Addresses any significant change in external conditions that would affect the quality or environmental integrity of the project. The signed attestation described in the GHG Plan has not been provided for the initial reporting period. In addition, Section III.4 of the Monitoring Report includes a reference to an Attestation related to the project remaining in regulatory compliance over the reporting period. This attestation has not been provided for verifier review.	*Kootznoowoo_GHG Plan_7_26_19.pdf* *Kootz_MonitoringReport_07_26_19.pdf*
			<u>Findings from Review on 25 February 2020:</u> The signed copies of the project attestations described in response to this issue were reviewed by the verifiers. The Attestation of Regulatory Compliance referenced in the project Monitoring Report certifies that the project has remained in full regulatory compliance and has had no violations or other instances of noncompliance with laws and regulations, or other legally binding mandates related to the project activities was signed by Hal Dreyer, President of Koottznoowoo Inc. on 31 January 2020. An Attestation of Offsets Title signed by Al Dreyer on 31 January 2020 asserts that Koottznoowoo Inc. holds, free of any lien, charge, security interest or other encumbrance, legal title to and all ownership rights to any removal, limitation, reduction, avoidance, sequestration or mitigation of any greenhouse gas associated with the project. This document confirms that ownership and use rights to the carbon claims remain clear and uncontested for the reporting period. In addition, the verifiers were provided with a copy of the project's Voluntary Offset Project Attestation signed by Hal Dreyer on 31 January 2020. Verifier review of this attestation gives them the understanding that it is intended to satisfy the annual attestation statement requirements of the ACR standards and serves as a statement from the project proponent related to the continuance, ownership, and community and environmental impacts of the project.	*Kootznoowoo- Attestation of Regulatory Compliance.pdf* *Kootoznoowoo- Offsets Title Attestation.pdf* *Kootznoowoo- Voluntary Offset Project Attestation.pdf* *Kootznoowoo_GHG Plan_1_31_20.pdf*

			The request for the executed attestations described in the GHG Plan and Monitoring Report as required by the ACR standards have been provided, and this issue is therefore considered closed.	

OPO/APD Response		
Date	***PP Comment***	***Additional evidence submitted for review by PP***
15-Nov-19	All project attestations have now been provided.	Kootznoowoo- Attestation of Regulatory Compliance.pdf Kootoznoowoo- Offsets Title Attestation.pdf Kootznoowoo- Voluntary Offset Project Attestation.pdf Kootznoowoo_GHG Plan_1_31_20.pdf

Verifier Issue	**Issue ID:** 19-20	**Status: Closed**	**Checked by: LH**	**Date Identified 15-Nov-19**

ACR Standard ref	**GHG Plan Section**	**Significance**	**Issue Description**	**Comments**
ACR IFM Methodology, G **ACR Standard, 6.E**	GHG Plan Monitoring Report	Non conformance. *May impact OMM or conformance.*	Following the revisions made to the CO2 Calculation Workbook in response to the pre-site visit questions and issues raised by the verifiers, the ERT Calculation Workbook, GHG Plan, and Monitoring Report were not subsequently updated with the new carbon stock figures, and changes to the ERT calculations as a result. Once all calculation related issues are addressed the PP will need to update these documents with the final numbers so that the verifiers can check the accuracy of the reported data and trace the final figures back through to the source data in the supporting workbooks.	*Kootznoowoo_GHG Plan_7_26_19.pdf* *Kootz_MonitoringReport_07_26_19.pdf* *Kootznoowoo_RP_ERT_HWP_7_22_19.xlsx*
			Findings from Review on 27 February 2020: Following receipt of the updated ERT Calculation Workbook, GHG Plan, and Monitoring Report, the verifier reviewed these documents to confirm the accuracy of the final reported GHG emission reduction data, by tracing the values back through to the source data in the quantification workbooks. Values in the ERT Calculation workbook were confirmed to be accurate and could be traced back to the source data in the supporting 100 Year Calculation workbook and Start RP CO2 Calculation workbook. The final ERT values entered in the Monitoring Report (Section 5) were however inconsistent with the ERT Calculation workbook. Based on the verifiers data checks, the final values in the ERT Calculation workbook are believed to be correct and based on the source data in the supporting workbooks. It appears that it is just the final reported values in the Monitoring Report that need to be updated/corrected.	*Kootznoowoo_GHG Plan_1_31_20.pdf* *Kootznoowoo_MonitoringReport_01_31_20.pdf* *Kootznoowoo_RP_ERT_HWP_01_31_20.xls* *Kootznoowoo_100Yr_Calcs_01_31_20.xlsx* *Kootznoowoo_Start_RP_CO2_01_31_20.xlsx*

			Findings from Review on 31 March 2020: While most of the previously noted discrepancies between the final carbon stock figures presented in the GHG Plan, Monitoring Report and supporting calculation workbooks were addressed, a few minor differences were found to remain. These were brought to the attention of the Project Proponent in an email communication on 31 March 2020.	*Kootznoowoo_100Yr_Calcs_3_20_20.xlsx* *Kootznoowoo_RP_ERT_HWP_03_20_20.xlsx* *Kootznoowoo_GHG Plan_3_20_20.pdf* *Kootznoowoo_MonitoringReport_03_20_20.pdf*
			Findings from Review on 3 April 2020: The verifiers reviewed the updated final versions of the GHG Plan and Monitoring Report provided and were able to trace the final carbon stock values in these documents back through to the supporting calculation workbooks to confirm the accuracy of the information reported in these final documents. This issue is therefore considered closed.	*Kootznoowoo_GHG Plan_04 03_20.pdf* *Kootznoowoo_MonitoringReport_04 03_20.pdf* *Kootznoowoo_100Yr_Calcs_4_1_20.xlsx* *Kootznoowoo_RP_ERT_HWP_4_1_20.xlsx*

OPO/APD Response

Date	***PP Comment***	***Additional evidence submitted for review by PP***
15-Nov-19	All of these files have been updated.	*Kootznoowoo_GHG Plan_1_31_20.pdf* *Kootznoowoo_MonitoringReport_01_31_20.pdf* Kootznoowoo_RP_ERT_HWP_01_31_20.xls
20-March-20	All files have been updated.	*Kootznoowoo_GHG Plan_3_20_20.pdf* *Kootznoowoo_MonitoringReport_3_20_20.pdf* Kootznoowoo_RP_ERT_HWP_3_20_20.xls
3-Apr-20	**This text was entered by the verifiers based on an email communication with the Proponent on 3 April 2020.* All remaining discrepancies identified by the verifiers have been addressed. The GHG Plan and Monitoring Report have been updated accordingly.	Kootznoowoo_GHG Plan_04 03_20.pdf Kootznoowoo_MonitoringReport_04 03_20.pdf

Verifier Issue	**Issue ID:** 19-21	**Status:** **Closed**	**Checked by:** **LH**	**Date Identified** **15-Nov-19**

ACR Standard ref	**GHG Plan Section**	**Significance**	**Issue Description**	**Comments**
ACR IFM Methodology, 3.2	ERT Calculation Workbook	Non conformance. *May impact OMM or conformance.*	The verifiers note in the Baseline HWP Calculations, hardwood saw and pulp volume is reported and quantified. The verifiers question if there are even any commercially viable hardwood species in the region and in the project area that are actually marketable, and if any volume associated with hardwood species should be included in the quantification of harvested wood products. It is noted that there aren't even any hardwood regional mill efficiency factors included in the ARB Regional Mill	*Kootznoowoo_RP_ERT_HWP_7_22_19.xlsx* *Kootznoowoo_100Yr_Calcs_7_21_19.xlsx*

			Efficiency Data that is applied in the quantification of carbon storage in HWP, suggesting hardwood species in the region aren't commercially viable. When accounting for mill efficiencies in baseline HWP, the ERT Calculation Workbook appears to be applying the wrong SW Pulp mill efficiency factor. The Baseline HWP Step 4_5 tab shows the correct mill efficiency factors, but the SW Pulp factor doesn't appear to be applied correctly on the Step 1_2_3 tab. The incorrect SW Pulp factor is also carried through to Table E.1.k in the GHG Plan. Related to the percentage of carbon in baseline HWP proportioned into the relevant wood product categories, Table E.1.l of the GHG Plan identifies the wrong ARB Supersection and product percentage factors that are being applied. In the 100 Year Calculation Workbook, values of HWP in t CO2e are annualized for the decadal periods outlined (e.g. 2018, 2028 etc.) for the 100-year projections. However, for years 2018, and 2038, the values in t CO2e appear to be interpolated by a period/factor of 5 years, rather than 10, while all other years are interpolated by 10 years. It isn't clear why a factor of 5 is applied in the initial and final periods, when all others apply a factor of 10 to annualize over the 10-year period. When determining the amount of carbon storage in HWP in-use and landfill, the storage factors applied appear to be proportioned by SW Sawtimber and SW Pulp, rather than directly applying the storage factors for the Southeast and South Central Supersection. The verifiers request clarification on why this was done and the rationale behind this approach. This issues/questions could be discussed during the model review call once scheduled, or the verifiers are open to setting up a separate call to discuss this, and get a walkthrough of the baseline HWP calculations.	
			<u>Findings from Review on 10 March 2020:</u> The response to this issue clarifies that in the Baseline_HWP_Step_1_2_3 tab of the ERT HWP Calculation Workbook, there are only softwood mill efficiency percentage values given, and that a mill efficiency value of 0% is given for all hardwood volumes so that there is no contribution from hardwood into the carbon storage in harvested wood products pool. The verifiers concur. While hardwood volume depleted from the onsite carbon stocks as a result of projected baseline harvesting is being reported (Output of Step C.1), application of a 0% mill efficiency value for hardwoods ensures there is no contribution into the harvested wood product pool from hardwoods. Verifier review of the updated ERT HWP Calculation workbook confirmed that the SW Pulp factor is now correctly being applied on the Step 1_2_3 tab. The correct SW	*Kootznoowoo_100Yr_Calcs_01_31_20.xls* *Kootznoowoo_RP_ERT_HWP_01_31_20.xls* *Kootznoowoo_GHG Plan_1_31_20.pdf*

			Pulp factor is now also carried through to Table E.1.k in the GHG Plan. The verifiers have updated their Baseline HWP data checks accordingly. Table E.1.l of the GHG Plan now also identifies the correct ARB Supersection and product percentage factors that are being applied in the calculation of carbon storage in harvested wood products. The verifiers accept the explanation of the annualized values of HWP in t CO2e for the decadal periods outlined (e.g. 2018, 2028 etc.) for the 100-year projections. It is now understood that this is a result of the FVS outputs, where the first & last years (decades) are only representative of the initial and final 5 year periods (2018 – 2023 & 2113 – 2118), while the years in between are annualized on a 10 year period. A satisfactory explanation is given for the reasoning for the proportioning by SW Sawtimber and SW Pulp, rather than directly applying the storage factors for the Southeast and South Central Supersection when determining the amount of carbon storage in HWP in-use and landfill. A reasonable assumption is made that all pulpwood volume will be used for paper and all sawtimber volumes will be used for lumber and Alaskan sawtimber exports, and the corresponding volumes were confirmed to have been apportioned accordingly. Following the corrections made in response to this issue, and clarifying explanations provided, the verifiers baseline HWP data checks were updated accordingly. The baseline carbon storage in harvested wood products was confirmed to accurate and in accordance with the ACR standards. This issue is therefore considered closed.	

OPO/APD Response		
Date	***PP Comment***	***Additional evidence submitted for review by PP***
15-Nov-19	The Baseline_HWP_Step_1_2_3 tab only has softwood mill efficiency percentages, and the hardwoods are given 0% to prevent any hardwood pulp and sawtimber from receiving any harvested wood products. The SW pulp mill efficiency has been added back into the Baseline_HWP_Step_1_2_3 tab. The GHG plan has been corrected to list Southeast and South Central Alaska. The product percentages were confirmed to be correct in the GHG plan and HWP calculations. With regards to the annualized values, the first year of FVS outputs (2018) is only representative of the five-year period for 2018-2023, whereas the year listed as 2028 is representative of 2023-2033 (two cycles of FVS outputs – 2023 and 2028). Similarly, the last year of FVS outputs is only representative of the 5-year cycle for 2113-2118. As a result, to determine the correct annualized values for the first and last years, we divide those values by 5 years instead of 10 years, like we do for all 10-year periods in between the first and last year.	Kootznoowoo_100Yr_Calcs_01_31_20.xls Kootznoowoo_RP_ERT_HWP_01_31_20.xls

	Based on the wood product percentages for the Southeast and South Central Supersection we know that only Lumber, Paper, and Alaskan Sawtimber Exports are generated in the region. We assumed that the pulpwood will be used for paper and sawtimber will be used for lumber and Alaskan Sawtimber exports and apportioned the volumes accordingly. We are happy to follow up on any of these issues during a modeling call.	

Verifier Issue	**Issue ID:** 19-22	**Status: Closed**	**Checked by: LH**	**Date Identified 3-Mar-20**
ACR Standard ref	**GHG Plan Section**	**Significance**	**Issue Description**	**Comments**
ACR IFM Methodology, 3.1.1	CO2 Calculation Workbook Plot Data Plot Shapefile	Possible non conformance. *May impact OMM or conformance.*	When reviewing some of the data checks performed, the verifiers noticed that the plot IDs and total number of plots are different between the Plot Data worksheet provided, and the plot layer shapefile and the Start CO2 Calculation workbook. The Plot IDs in the Start CO2 Calculation workbook and plot shapefile are the same and the total number of plots is 166. In the Plot Data worksheet, there are a total of 218 plots. The verifiers request an explanation of this difference and why the Plot Data worksheet shows 218 plots, when the final forest inventory only included 166 plots.	*Kootznoowoo_Start_RP_CO2_01_31_20.xlsx* *Kootznoowoo_Plot_Data_8_16_19.xlsx* *Kootz_Plots_6_18_19.shp*
			Findings from Review on 24 March 2020: The verifiers accept the provided explanation as to the difference in the Plot Ids and total number of plots found in these files. The verifiers understand the final number of plots and correct plot IDs used in the forest inventory to estimate onsite carbon stocks for the project to be 166 (from a target of 172, with 6 dropped that were outside of the final project area boundary) as shown in the Start RP CO2 calculation workbook and plot shapefile. This issue is considered closed.	*Kootz_Plots_6_18_19.shp* *Kootznoowoo_Start_RP_CO2_01_31_20.xlsx*

OPO/APD Response

Date	***PP Comment***	***Additional evidence submitted for review by PP***
3-Mar-20	When we initially designed the inventory, we had originally planned to gather 250 plots because we wanted to give the landowner the option to do a compliance project if they chose to do so. However, they elected to pursue a voluntary project mid-inventory, so we had to choose a cutoff point for the Plot IDs to be collected to optimize between confidence deduction and inventory cost. We determined this number to be 172 plots, so targeted gathering all plots between 1-172 We could not use plot IDs above 172 because they were randomly scattered throughout the property, so using non-consecutive plots above 172 would have introduced potential bias into the inventory as we did not intend to collect remaining plots missing between PlotID 172-250 after hitting our target plot count. Please note that the missing plots up to 172 were plots that ended up being outside of the final project boundary."	

Appendix C: Project Team

Verification Team	Qualifications
Lawson Henderson	Lawson joined S&A Carbon as a Senior Associate in 2016, and expands the existing capacity of the forest carbon offset verification team. He is acts as an ARB Verifer on forest carbon offset projects, and is qualified as a Lead Offset Verifier under the ARB regulation. Lawson currently supports the S&A team with reviews of verification documents, field verifications of ARB forest carbon offset projects, and S&A's actions to become accredited under the American National Standards Institute – ANSI). Lawson brings nearly a decade of experience in forest certification through his prior employment with Rainforest Alliance, where he acted as a project manager and lead auditor of forest carbon offset projects against the major voluntary GHG programs, and FSC Forest Management & Chain of Custody Certifications. Lawson is qualified as a Lead Verifier under the Climate Action Reserve (CAR), and is also qualified as a AFOLU IFM Expert under the Verified Carbon Standard (VCS) program. He has led the validation and verification of IFM, AR & REDD forest carbon offset projects against the major voluntary GHG programs globally. He is a member of both the Gold Standard Foundation (GSF) Land Use and Forestry (LUF) and Oversight and Assurance (OA) Technical Advisory Committees (TAC). Lawson holds a B.S.F in forest management from the University of New Hampshire (2005).
Pablo Reed	Pablo Reed holds a B.S. in Forest and Ecological Engineering as well as a minor in Latin American Studies from the University of Washington in Seattle. He has also recently completed a Masters of Environmental Management degree at the Yale School of Forestry & Environmental Studies. Prior to his return to grad school, he spent the preceding six years of his life working with conservation and development projects in various countries in Latin America. He served as country director for a joint USAID/Idaho State University community conservation project in the Alta Verapaz region of Guatemala and also spent time in Panama working as an environmental and GIS consultant. His most recently

Verification Team	Qualifications
	worked for the Peace Corps in Ecuador, where he served as program manager for the posts' natural resource conservation program. While at Yale, his program of studies centered on social and political ecology as well as natural resource management policy. His research and subsequent thesis centered on the development of REDD (Reducing Emissions from Deforestation and Degradation) policy frameworks, especially as they pertain to the inclusion of communal Indigenous territories and lands (Ecuador, summer 2010). Pablo is an ARB Forestry project specialist, and an ARB Lead Verifier.
Elizabeth McGarrigle	Elizabeth McGarrigle holds three forestry degrees (BScF, MScF, PhD). Her work has focused on forest inventory, growth and yield, and forest management planning. Her research focused on examining the impact of uncertainties in the inputs to long term forest management plans when optimization models are employed during the Master's program. While completing her PhD, she was part of the team developing a regional growth and yield model for the Acadian forest in the Northeastern United States and Canada. She developed a stand level model that is used to predict survivor growth, ingrowth, and mortality in the region. As part of her dissertation, she focused on several variants of the Forest Vegetation Simulator and several regional growth and yield models from across Canada and the United States. Dr. McGarrigle is currently working with the provincial government in Nova Scotia Canada as a Forest Inventory Data Analyst where she is responsible for the design and analyses of permanent sample plots. In addition to her work as a biometrician on several ARB forest projects, she has also been involved in research at Natural Resources Canada using a fine scale forestry model to assess the impact of climate change on species composition in forest types across Canada.
Robert Turner	Robert Turner holds a BS in finance and a MS in forest management. He brings over 25 years of experience in forest management consulting, primarily in the northeastern US. This experience spans a broad range of technical and analytical services, often related to forest inventory and management planning, mensuration, growth and yield modeling,

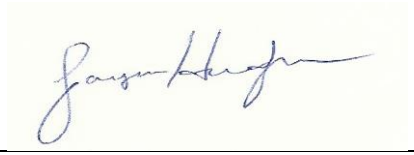
Verification Team	Qualifications
	financial modeling, information and decision support systems, and spatial analysis. His expertise in long-term timber supply modeling has supported state and regional forest policy in all the states of the Northern Forest. Robert is accredited as a lead verifier by ARB under their Forest and Urban Forest protocols and has been a verifier/biometrician on fifteen forest carbon projects under CAR, ARB & VCS standards. He is an SAF Certified Forester.
Alexa Kandaris	Alexa has 4 years' experience in carbon auditing and climate change mitigation policy and is accredited by ARB as a verifier under their US Forests protocol. In this time, she has participated in over 60 verifications of carbon offset projects and corporate inventories under a variety of GHG programs, including the Air Resources Board, Climate Action Reserve, American Carbon Registry, and Carbon Disclosure Project. Alexa developed tracking systems for a program registered under the Clean Development Mechanism as a Program of Activities and has been involved in registering this program of activities with the Gold Standard. Prior to this, Alexa conducted extensive research on emissions leakage in addition to authoring work pertaining to the structure of California Assembly Bill 32. Alexa is currently responsible for implementation of S&A's corporate management system to ensure ongoing improvement and compliance with ISO requirements. In addition to this, she has field experience with Forestry, Ozone Depleting Substances, and Livestock verification projects and is qualifiifed as a lead verifier for GHG inventory verifications. She holds a Bachelor of Arts in Economics with a minor in Business Administration, and a focus on natural resource and environmental Economics.
Kyle Silon	Kyle Silon holds an M.S. in Energy and Environmental Economics and is an ABR accredited Lead Verifier. He has ten years' experience in climate change mitigation strategies and carbon reduction projects. Prior to founding S&A, he worked for a leading international certification company, specializing in validation and verification of small-scale household energy demand projects (such as cook stove and water filter projects), primarily located in South America, Asia, and Africa. He has

Verification Team	Qualifications
	participated in numerous verifications of forestry, landfill, and livestock projects, and has worked across all major GHG programs, including the Air Resources Board, Verified Carbon Standard, Climate Action Reserve, American Carbon Registry, Gold Standard, and Clean Development Mechanism (CDM).
Beth Daut	Beth Daut has over 30 years of experience working with private, investment and industrial landowners in Maine, New Hampshire, Vermont, and the Adirondack region of New York. Beth has an A.A.S. degree in Forest Technology from the SUNY College of Environmental Science and Forestry Ranger School and a Bachelor's degree in Environmental Science from SUNY Plattsburgh. She is licensed in the states of Vermont and New Hampshire, and a member of Society of American Foresters. Civically, she is a member of the Berlin Conservation Commission and Tree Warden for the town of Berlin.
Ryan Harper	Ryan has over five years' experience as a forest inventory specialist, including collecting standard CSE data collection information including tree height, health, age and physical characteristics. He has experience inspecting forest stands for density, canopy cover, wildfire disturbances, fuels, woody debris, trunk and crown diameters, pathogens, lichen communities, ground cover vegetative species, tree health, and mortality, and with identifying signs of forest usage, harvesting, and management plans.

APPENDIX C: VERSION TRACKING

Version	Date	Developed By	Version Notes
1.0	4/10/2020	Kyle Silon	Initial Document
1.1	4/24/2020	Lawson Henderson	Updated by the Lead Verifier
1.2	5/1/2020	Pablo Reed	Technical Review
1.3	5/5/2020	Lawson Henderson	Updated to address Technical Reviewer Comments
1.4	5/7/2020	Alexa Kandaris	Approval

1.5	6/10/2020	Lawson Henderson/Pablo Reed	Updated to address ACR Comments
1.6	6/16/2020	Lawson Henderson/Pablo Reed	Updated to address ACR Comments

S&A Carbon Lead Verifier Name and Signature:	Lawson Henderson 
S&A Carbon Technical Reviewer Name and Signature:	Pablo Reed 
Date:	16 June 2020