PROTOCOL FOR THE CREATION OF FOREST CARBON OFFSETS IN BRITISH COLUMBIA [FCOP] – 2ND ASSESSEMENT METHODOLOGY ELEMENT ASSESSMENT REPORT

ENVIRONMENTAL SERVICES, INC.

ANSI ACCREDITED PROGRAM
GREENHOUSE GAS
VALIDATION AND VERIFICATION
0800

Document Prepared By: Environmental Services, Inc.

Methodology Title	Protocol for the Creation of Forest Carbon Offsets in British Columbia (FCOP)	
Version	Version 1	
Methodology Category	Methodology	X
	Methodology Revision	
	Module	
	Tool	
Sectoral Scope(s)	Sectoral Scope 14 (AFOLU)	

Report Title	Protocol for the Creation of Forest Carbon Offsets in British Columbia (FCOP) - Second Assessment Methodology Element Assessment Report
Report Version	Report Version 01
Client	Pacific Carbon Trust976 Meares Street, Victoria BC V8V 3J4 CANADA Contact: Chris Koski; phone: 250-952-6793; email: Chris.Koski@gov.bc.ca
Pages	171
Date of Issue	06 May 2015
Prepared By	Environmental Services, Inc. – Forestry, Carbon, and GHG Services Division

Contact	Corporate Office at: 7220 Financial Way, Suite 100, Jacksonville Florida 32256-USA; Phone: 904-470-2200 Fax: 904-470-2112; www.esicarbon.com
Approved By	Shawn McMahon – Lead Assessor; and Janice McMahon – Sr. Vice President - Technical Director
Work Carried Out By	Lead Assessor – Shawn McMahon; Assessment Team Members – Caitlin Sellers, Jonathan Pomp, Eric Jaeschke, Larry McCulloch, and Steve Ruddell; QA/QC – Janice McMahon

Summary:

Environmental Services, Inc., (ESI) was commissioned by Pacific Carbon Trust (PCT) to conduct a third-party assessment (2nd assessor) of the *Protocol for the Creation of Forest Carbon Offsets in British Columbia* – herein referred to as "FCOP" in accordance with the Verified Carbon Standard (VCS) program. FCOP is a project-based methodology and is the first of its kind in British Columbia (BC), enabling a wide range of eligible BC forest carbon offset projects to participate in the Verified Carbon Standard (VCS) program. FCOP falls under the Agriculture, Forestry, and Other Land Use Sectoral Scope 14 and allows the following forest carbon offset project types: Afforestation, Reforestation and Revegetation (ARR); Improved Forest Management (IFM); and Reduced Emissions from Deforestation/Degradation (REDD). No other approved VCS methodologies exist that allow for all types of AFOLU forest carbon offset projects within the environment of BC.

The purpose and scope of the methodology second assessment was to evaluate whether or not the methodology element was prepared in line with VCS requirements. ESI's assessment included a detailed review of eligibility criteria, baseline approach, additionality, project boundary, emissions, leakage, monitoring, data and parameters, and adherence to the project level principles of the VCS program (relevance, completeness, consistency, accuracy, transparency and conservativeness). ESI's assessment also included a detailed analysis of the methodology, literature reviews, technical reviews, and PCT's responses to all non-conformity reports (NCRs), clarifications (CLs) and opportunities for improvement (OFIs).

The ESI assessment team identified 102 NCRs/CLs/OFIs during the assessment process. All were addressed satisfactorily by PCT at the close of the assessment. These NCRs/CLs/OFIs provided necessary clarity to ensure that the methodology was in compliance with VCS rules and requirements.

ESI confirms all methodology assessment activities, including objectives, scope and criteria, level of assurance, and FCOP's adherence to the VCS Program and VCS Standard Version 3, as documented in this report, are complete. ESI concludes without any qualifications or limiting conditions that the *Protocol for the Creation of Forest Carbon Offsets in British Columbia* (v1) meets the requirements of the VCSA. ESI recommends that VCSA approve the methodology.

TABLE OF CONTENTS

1   INTRODUCTION

1.1   Objective

This methodology assessment was performed to evaluate the likelihood that implementation of the methodology would result in accurate calculations and appropriate eligibility criteria for GHG emission reduction/removal (ISO 14064-3:2006). This report summarizes the findings of the second methodology assessment of the Verified Carbon Standard (VCS) double approval process for a methodology element, referred to as the "Methodology". Pacific Carbon Trust, referred to as the "Methodology Developer," commissioned Environmental Services, Inc., (ESI), referred to as the "assessment team" to perform an assessment of the *Protocol for the Creation of Forest Carbon Offsets in British Columbia* (v1) (FCOP)*.*

This report presents the findings of a qualified assessment team of auditors and experts in methodologies for GHG emissions or who have assessed the methodology for compliance under the applicable VCS rules. Section 3 below provides the assessment methods and criteria. Section 3.5 presents summary findings of the methodology assessment, and Appendix A provides details of individual findings.

1.2   Summary Description of the Methodology

FCOP allows for Project Proponents to quantify the GHG reduction/removal benefits of a range of possible activities in forests within the Canadian province of British Columbia (BC). Eligible project activities include avoided deforestation (REDD), afforestation and reforestation (ARR), and improved forest management aimed to increase carbon stocks (IFM). The methodology follows the existing scientific knowledge base of estimation and quantification of carbon in forest carbon pools, but has been adjusted to optimize an approach suitable for the dynamics of BC forests. Project Proponents are given an ample selection of models and sampling protocols for the range of activities and forest carbon pools in BC. The models and protocols recommended under the methodology are consistent with national and Intergovernmental Panel on Climate Change (IPCC) standards.

Project development under FCOP requires following precise steps for determination of eligibility and to derive GHG emission estimates under the specified carbon pools. The methodology primarily accounts for CO_2 in forest and wood product carbon pools, but can accommodate comparatively small changes in emissions of methane and nitrous oxide depending on the project specific circumstances. The actual GHG emissions reductions/removals are achieved through implementation of the approved forest management project activities described in the methodology. A series of flexibility mechanisms are listed in the methodology to facilitate application to a wide range of forest offset projects in British Columbia.

2   ASSESSMENT APPROACH

2.1   Method and Criteria

This assessment is based upon standard auditing techniques in line with VCS rules to assess the correctness of the information provided. The assessment of a proposed methodology is more

specifically defined by ISO 14064-3:2006 (E), "the systematic, independent and documented process for the evaluation of a greenhouse gas assertion in a GHG project plan against agreed validation criteria." In accordance with VCS rules, a methodology assessment encompasses applicability conditions, project boundary, procedure for demonstrating additionality, procedure for determining baseline scenario, baseline emissions computations, project emissions computations, leakage computations, quantification of net GHG emission reduction and/or removals, monitoring, data and parameters, adherence to the project principles of the VCS Program, and relationships to approved or pending methodologies.

The criteria will follow the VCS program documents located at *http://v-c-s.org/program-documents*. These documents include the following:

- VCS Methodology Approval Process (v3.5, 08 October 2013)
- VCS Program Guide (v3.5, 08 October 2013)
- VCS Standard (v3.45 25 March 2015)
- Validation and Verification Manual (v3.1, 08 October 2013)
- VCS Program Definitions (v3.5, 08 October 2013)
- VCS Agriculture, Forestry and Other Land Use (AFOLU) Requirements (v3.4, 08 October 2013)

During the course of this methodology assessment, VCS issued several versions of their program documents. Each time a new version was issued, the assessment team ensured that any newly required VCS changes were included in FCOP.

2.2 Document Review

The FCOP methodology and associated files were initially submitted to ESI in March of 2012. The assessment team conducted a detailed review of the methodology against the criteria of the VCS guidance documents listed in Section 2.1. Other items the assessment team reviewed were completeness, logical coherence, and consistency with current best practices for quantification of emissions reductions and removals. A complete list of documents including methodology revisions can be found in Appendix B.

Prior to the preparation of the Methodology Element Assessment and Sampling Plan, the criteria describing the methodology were outlined by the methodology developer and were reviewed against the requirements of VCS.

2.3 Interviews

The objective of the interview process was to resolve requests for clarifications, corrective actions and other outstanding issues which are required to determine the outcome of the methodology assessment. The official opening meeting was conducted on 15 March 2012 between ESI attendees Janice McMahon and Caitlin Sellers; and subcontractors Steve Ruddell and Larry McCulloch. The agenda of the meeting consisted of introductions, project background, specialist roles in the assessment and next steps in the assessment process. Next, the methodology assessment audit process commenced and lead to rounds of Non-conformance Requests

(NCRs), Clarification Requests (CLs), and Opportunities for Improvement (OFIs). A categorical breakdown of findings is outlined in detail in Section 2.5. After issuance of a round of NCRs/CLs/OFIs, conference calls between the assessment team and the methodology developer (primarily Robert Seaton of Brinkman Earth Systems) were arranged to reconcile understanding of the issues. To ensure transparency in the resolution process, concerns raised and responses given were documented in greater detail and presented in Section 3.5.

Additional interviews were arranged, as needed. The methodology developers addressed NCRs/CLs/OFIs in subsequent versions of the methodology, and assessors required additional clarification on changes applied through eight (8) successive rounds of review. The table in Section 2.4 below lists the individuals involved in the major meetings and their organizational affiliation for this second methodology assessment.

The closing meeting was held on 05 May 2015. Robert Seaton was in attendance representing the methodology developer and Shawn McMahon represented ESI. The closing call was primarily a debrief on the assessment process.

2.4   Assessment Team

The assessment team consisted of qualified individuals familiar with the sectoral scope and technical areas of the methodology. The composition of the assessment team operated at several qualification levels:

- Lead Assessor (L)
- Assessment Team Member (TM)
- Assessment Expert (E)
- Assessment QA/QC (QA/QC)

Team Member	Expertise/Experience
Shawn McMahon (L)	Senior Forester approved to conduct third-party carbon sequestration validations and verifications under VCS. Specializes in third-party carbon offset validations and verifications, methodology validations, carbon sequestration project development, development and implementation of management plans for enhancement of carbon stocks, development of carbon and environmental asset tracking programs, and team management. Approved VCS AFOLU Expert for conducting validations of WRC methodologies
Jonathan Pomp (TM)	Senior Forester. Specializes in carbon offset consulting, design and implementation, quantification & analysis, marketing, strategy development, project development, and verification. Responsible for GHG forestry offset project validations/verifications, forest biometrics, and field assessments for projects around the world.

Eric Jaeschke (TM)	Project Forester and Remote Sensing Specialist. Duties include technical GIS and remote sensing support for carbon offsetting projects through validations/verifications under various rule sets, data analysis and field validations.
Caitlin Sellers (TM)	Senior Forester responsible for project management and client coordination; technical services such as vegetative community characterizations, forest inventories and assessments, and GHG validations/verifications.
Steve Ruddell (E)	VCS-AFOLU Expert/Validation Team Member. Principal and founder of CarbonVerde, LLC. Approved VCS AFOLU Expert for conducting validations of IFM and REDD methodologies. Qualified VCS, ACR, and CCB validator and verifier. Works with project developers and private equity firms on the feasibility and development of Improved Forest Management, Avoided Conversion, Afforestation/Reforestation, and REDD forest carbon projects to the requirements of the VCS. In this methodology assessment Steve Ruddell was responsible for reviewing the methodology for adherence to AFOLU Requirements.
Larry McCulloch (E)	General Technical Forestry Expert/Team Member. Professional Canadian Forester. Principal and founder of LM Forest Resource Solutions Ltd. Expert of common BC forestry Standard Operating Procedures (SOPs), and REDD project baseline and additionality components.

2.5   Resolution of Findings

The process of methodology assessment involved eight (8) formal rounds of assessment by the assessment team and resulting in a methodology version which was in conformance to VCS rules. Findings related to corrective action, clarification requests or other findings were resolved during communication between the assessment team and the methodology developer. More specifically, where noted by the assessment team, the methodology developer implemented corrective actions by amending methodology modules and providing written clarification responses. Types of findings were characterized in the following manner:

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

- Non-conformity to VCS guiding documents listed in Section 2.1. To address these non-conformities the methodology was modified to come into alignment with VCS requirements.

- Redundancy was prevalent, and internal consistency among Sections was lacking. Again the methodology was revised to consolidate redundancies wherever possible.

- Mathematical formulae in Sections were incorrect. The formulae were revised to correct all errors identified.

- Additional information was required by the assessment team in order to confirm reasonable assurance for compliance. Additional documentation was provided in support of various assertions to ensure reasonable assurance.

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

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

Important findings and points of discussion from the methodology element are presented below. Detailed summaries of each finding, including the issue raised, responses and final conclusions are provided in Appendix A.

Finding/Discrepancy	Assessed	Resolution
Since the initial development of the methodology, VCS rules have changed (08 October 2013).	VCS Standard v3.4	Where applicable, methodology developers have amended the methodology element to adhere to new VCS rules. For example, relevant default values are now described adequately and procedures are provided for Project Proponents to establish them.
It is unclear in FCOP if the baseline will be determined with a standardized or project method.	VCS Standard v3.4, Section 4.1.6	Clarity has been added for the baseline scenario and additionality that no standardized methods are used, and the VCS CDM Baseline and Additionality Tool has been deployed.
Applicability versus eligibility conditions were unclear.	VCS Standard v3.4, Section 4.3.1	The methodology has been redrafted to conform to the standard applicability format, as requested.
The SSRs shown in the original version of FCOP were not consistent with the required SSRs for each project type from Section 4.4 of the AFOLU Requirements.	VCS Standard v3.4, Section 4.4.1 AFOLU Requirements v3.4, Section 4.4	Section 5.2.1, Table 2 was vetted by the assessment team and now contains all required SSPs, consistent with VCS rules.

The initial version of FCOP contained a requirement that the establishment of a baseline scenario will follow requirements in the draft Federal Guide for Protocol Developers, which provided very few specific selection criteria for determining which approach should be used.	AFOLU Requirements v3.4, Section 4.4.1	FCOP was revised to require the general CDM method for establishment of the baseline.
FCOP's initial version was unclear on how leakage was to be determined.	AFOLU Requirements v3.4, Section 4.6.1	The final version of FCOP detailed the scope/scale/area of leakage determination to be in line with VCS requirements.
Leakage mitigation was not originally included in FCOP.	AFOLU Requirements v3.4, Section 4.6.6	The final version of FCOP (Section 8.3) contains sufficient requirements for leakage mitigation, in line with VCS requirements.
Monitoring requirements were not specifically laid out in accordance with VCS rules. There appeared to gaps for significant pools, where no criteria were specified at all.	AFOLU Requirements v3.4, Section 4.8.1	Section 9 in the final version of FCOP contains adequate "Data and Parameter" tables detailing all included monitoring requirements.

3   ASSESSMENT FINDINGS

The proposed VCS Methodology - Protocol for the Creation of Forest Carbon Offsets in British Columbia (FCOP) was found to be in full compliance with the principles set out in the VCS Standard. Specifically, quantification of GHG reduction benefits for forests in the province of BC appears to be consistent with best practice and scientific consensus. Carbon pools and baseline types are defined in accordance with AFOLU Requirements and follow previously validated methods for determining emissions by using a project-tailored model approach. The AFOLU Non-Permanence Risk Tool was appropriately invoked to determine risk buffer withholdings at the project and baseline scenario for project activities.

The assessment process focused on the principles set forth by the VCS Standard:

- The revised methodology element adheres to the principle of relevance by selecting the GHG sources, GHG sinks, GHG reservoirs, data, and methodologies appropriate to the needs of the VCS Program.

- The revised methodology element adheres to the principle of completeness by including all relevant GHG emissions and removals and including all relevant information to support criteria and procedures.

- The revised methodology element adheres to the principle of consistency by enabling meaningful comparisons in GHG-related information.

- The revised methodology element adheres to the principle of accuracy by reducing bias and uncertainties as far as is practical.

- The revised methodology element adheres to the principle of transparency by disclosing sufficient and appropriate GHG-related information (i.e., giving sufficient and appropriate justification of procedures and criteria) to allow intended users to make decisions with reasonable confidence.

- The revised methodology element adheres to the principle of conservativeness by using conservative assumptions, values and procedures to ensure that net GHG emission reductions or removals are not overestimated.

3.1 Relationship to Approved or Pending Methodologies

During the course of the methodology element assessment, current methodologies under the VCS Program have been enhanced and new methodologies added. However, none of the existing methodologies are consistent with the BC Emission Offset Regulation and none of the current AFOLU Methodologies or those currently under development allow for multiple forest and carbon management activities as part of a single project.

The list of methodologies reviewed includes:

VM0003	Methodology for Improved Forest Management through Extension of Rotation Age v1.0
VM0004	Methodology for Conservation Projects that Avoid Planned Land Use Conversion in Peat Swamp Forests v1.0
VM0005	Methodology for Conversion of Low-productive Forest to High-productive Forest. v 1.1
VM0006	Methodology for Carbon Accounting in Project Activities that Reduce Emissions from Mosaic Deforestation and degradation v 1.0
VM0007	REDD Methodology Modules (REDD-MF) v1.1
VM0009	Methodology for Avoided Mosaic Deforestation of Tropical forests v 1.0
VM0010	Methodology for Improved Forest Management: conversion from Logged to Protected Forest v1.0
VM0011	Methodology for Calculating GHG Benefits from Preventing Planned degradation v 1.0
VM0012	Improved Forest Management on Privately Owned Properties in Temperate and Boreal Forests (LtPF) v1.0

VM0015	Methodology for Avoided Unplanned Deforestation
VM0017	Adoption of Sustainable Agricultural Land Management
VM0022	Quantifying N2O Emissions Reductions in Agricultural Crops through Nitrogen Fertilizer Rate Reduction
Pending	Avoiding Planned Deforestation of Undrained Peat Swamp Forests

FCOP examines its relationship to other approved or pending VCS methodologies on Page 2 of the methodology. The assessment team reviewed and confirmed these assertions were accurate and that similar methodologies could not have reasonably been revised to meet the objectives of FCOP. No evaluation under Section 5.2 of the Methodology Approval Process is required. The methodology is intended for use within BC on private and Crown land and therefore carries no relationship with approved or pending methodologies under the VCS Program or other approved GHG program.

3.2   Stakeholder Comments

This methodology was open for public comment from 13 December 2011 to 12 January 2012, and comments for suggested improvements were submitted by Qinglin Li of the BC Ministry of Forests and Bryan Foster of Ecosystem Restoration Associates Inc. PCT responses to the public comments were reviewed by the assessment team for completeness, and findings are provided (Table 3).

Finding (Public Comment)	Developer's Response	Assessment Team Findings
Qinglin Li		
Section 5.2.4: Why does it repeat: i.e., 5.2.4 vs 5.3.1, this why it creates the document too long! P90: should delete: 'CBM-CFS3 is used for national-level and forest management unit-level forest carbon accounting in Canada. FORECAST has also been pre-approved for use in B.C. Both of these models have been parameterized using field data from B.C. forest ecosystems.' Because, none 'pre-approved' any models, and no context of 'pre-	1) Repetition: The observation is correct, but does not materially affect the methodology. No action is required. 2) The wording regarding CBM-CFS3 and FORECAST is clumsy: The observation may be correct, but does not materially affect the methodology. No action is required.	The assessment team agrees that these comments do not affect the materiality of the methodology but if implemented would improve the readability of the document. Throughout the assessment process, FCOP was revised to remove irrelevant or redundant Sections. Section 8.0.1.1.2 now includes adequate and appropriate model

approved' either, namely 'pre-approved' for what usage?		selection criteria.
Section 8.3: The leakage factor is well addressed in this document but permanence is mentioned in 'reversal' Section. That leakage addresses spatial scale, while permanence addresses temporal scale (how long the carbon credits/offsets should remain in the 'sink'?). Thus, the permanence should be required in the calculation explicitly. Once, only once the reversal event happens the discount method shall apply to discount the efforts, but not for the projects in a short period (i.e., 30 years).	The issues regarding permanence are managed through the VCS Non-Permanence Risk Assessment and VCS Pooled Buffer Account. The methodology references these tools, but essentially permanence is programmatically managed by the VCS. No action is required.	The methodology developer correctly invokes the VCS Non-Permanence Risk Assessment and VCS Pooled Buffer Account (Item 133). Previous language in the methodology Section 9.3.5 addressing project-level requirements (i.e., reversal or over-issuance of credits) has been deleted in order to defer to VCS Program documentation (Item 175).
Bryan Foster		
The carbon benefit of afforestation or reforestation at northern latitudes must be discounted due to the loss of albedo. Bala, G. et al. 2007. Combined climate and carbon cycle effects of large-scale deforestation. PNAS 104:6550-6555. Betts, R.A. 2000. Offset of the potential carbon sink from boreal forestation by decreases in surface albedo. Nature 408:187-190.	This issue has not been previously addressed in a methodological context. Although the albedo effect can be estimated, the thrust of global warming action under VCS and other standards is reduction in GHGs and their insulating effects. Because albedo effects are local and seasonal, the impact of these effects on global climate is neither simple nor uniform. More science is needed to allow accurate accounting of albedo effects within a GHG program. No action is required.	The assessment team agrees with the methodology developer's evaluation of this comment. More research is needed before albedo can be incorporated in VCS methodologies pertaining to northern latitudes.

Title box: Please clarify by changing to 'include only' or 'include among others' (depending on intent).	Comment is valid. To clarify we will change "Applicable project types include..." to "Applicable to..."	Assessment team agrees this wording clarification was necessary.
Relationship to approved or Pending Methodologies: AFOLU 4.1.3 Where a methodology combines AFOLU project categories, the methodology shall adhere to all sets of requirements pertaining to each and every project category covered, either separating activities, or where activities cannot be separated, taking a conservative approach to each requirement.	Quoted text is not relevant to this paragraph, which is referencing differences with existing methodologies only. No action is required.	Methodology developers have met this requirement by clarifying that FCOP does not rely upon part of any of the listed VCS-approved methodologies. Methodology developers sufficiently demonstrated the need for the new methodology in accordance with the VCS Methodology Approval Process Section 5.2. See Section 3.1 of this report and Page 2 of FCOP for more details (Item 150).
Section 1.3: What is the process to reconcile public comments from VCS methodology review with comments from public review of draft protocol posted by BC ministry independently?	This comment refers to the FCOP stakeholder engagement process, not the VCS public review. The comment does not materially affect the methodology. No action is required	Section 1.3 was removed from the methodology due to it being superfluous (Items 134 & 153).
Section 2.1: This summary is fairly vague and nonconventional. A more conventional summary provides a table that lists sources of gases, types of gases (CO_2, CH_4, N_2O), whether they are included/excluded, and a justification/explanation	Comment is correct. Information in the Section could be summarized in a tabular format, which would not be a material change to FCOP, and would be clearer. We will include a table that better summarizes the eligible GHGs.	Assessment team agrees the tabular format is more readable, and the methodology developer sufficiently satisfied the public comment with the subsequent revision.
Section 2.2: *Ex post* crediting should be mentioned here.	*Ex post* crediting is programmatic within the VCS and not necessary to include in the	Assessment team agrees that *ex post* crediting is captured in VCS Program

	methodology. No action is required.	documentation and not addressed as guidance in a methodology.
Section 4.1, Definition of forest land: The term "are capable of achieving" is problematic in terms of A/R eligibility as the definition must provide clear guidance as to whether remotely sensed images classify as forests or not at a particular time.	Interpretation of the definition of "forest land" within a remote sensing context should not be part of the definition. The phrase "are capable of achieving" is consistent with the UNFCCC definition which uses the phase "has the potential to reach". The UNFCCC definition is accepted under the VCS definition of a forest. No action is required.	Methodology developer has integrated a more precise definition of forest in Section 3 of the methodology and includes a reference to UNFCC. A further reference is made to the likelihood of changes to the accepted forest definition (Item 136). This public comment has been sufficiently addressed by the methodology developer.
Section 4.1 General Criteria bullet 1: Is there a geographic constraint as well either to B.C. or all Canadian provinces or temperate and boreal forest types? This element or lack thereof should be explicitly mentioned.	This comment is relevant. While the methodology references the applicable geographic region in the title and other Sections, it is never explicitly required by the methodology. We will include a bullet on page 13 that says "are located in the province of British Columbia"	This applicability condition added to the methodology is consistent with the designing of the methodology to be applicable to British Columbia and the British Columbia Forest Offset Guide Version 1.0.
Section 4.1.1: Definitions must be reconciled with VCS AFOLU definitions for this methodology to be considered under VCS. Afforestation is defined as activity on land that has been in a non-forested state for 50 years.	The definition of "afforestation" used in this methodology adheres with the definition of "reforestation" used by the VCS. Afforestation and reforestation have the same requirements under the project category ARR. We will include a bracket next	The revised definition of ARR activities in Section 3 has been reconciled with VCS Program Definitions and AFOLU Requirements Section 4.2.1 to sufficiently satisfy this public comment (Items 96 & 136).

	to Afforestation stating "(equivalent to VCS project category Afforestation, Reforestation and Revegetation (ARR))" and a footnote justifying us maintaining the use of the term "afforestation" in this context, because it is used within British Columbia's forest inventory legislation.	
Section 4.1.2 First Bullet: The reforestation eligibility criteria are currently not conforming to VCS AFOLU requirements, which state in Section 4.2.1 "The project area shall not be cleared of native ecosystems within the 10-year period prior to the project start date."	The requirements in this methodology for "reforestation" align with the VCS requirements for "Low-Productive to High-Productive Forests". We will include a bracket next to Reforestation stating "(equivalent to VCS project subcategory Low-Productive to High-Productive Forest (LtHP))" and a footnote justifying us maintaining the use of the term "reforestation" in this context, because it is used within British Columbia's forest inventory legislation.	This comment was largely addressed in the second assessment (Items 96 & 136). The ARR definition in Section 3 of the methodology addresses the definition of afforestation as it relates to BC forest inventory legislation and sufficiently satisfies this public comment.
Section 4.1.2 Last Bullet: This statement needs to be clarified if it is meant to have any significance. How different must activities be, relative to those that took place earlier? Different spacing, different species, different management objectives, all or any?	The comment does not materially affect the methodology, as the later sentences specify "continuation", the meaning of which should be clear. No action is required.	This comment was addressed in the second assessment. The ARR definition in Section 3 of the methodology addresses the definition of afforestation as it relates to BC forest inventory legislation and sufficiently satisfies this

		public comment (Items 96 & 136).
Section 4.1.3: I strongly suggest harmonizing all of these definitions with VCS standard definitions, by which I mean that the VCS definitions should be used without modification. If any modification is necessary from the author's perspective, the modification should be explicit so they can then be reviewed by public and auditors.	We will include a bracket next to each of the FCOP terms stating the equivalent VCS project categories or terms and a footnote justifying us maintaining this term because it is used within British Columbia's forest inventory legislation	The revised definition of ARR activities in Section 3 has been reconciled with VCS Program Definitions and AFOLU Requirements Section 4.2.1 to sufficiently satisfy this public comment (Items 96 & 136).
Section 4.1.3, First Bullet: Legally sanctioned logging is typically an eligibility constraint on IFM. Otherwise there is a question whether illegal degradation is included as an eligible activity.	The first bullet under General Forest Project Eligibility Criteria requires "all projects must follow applicable legislation and regulations for forest and land management in BC." Therefore legally sanctioned logging is an eligibility constraint, and the comment is irrelevant. No action is required.	This comment has been addressed in the revised applicability conditions and project boundary, which correctly refers Project Proponents to the IFM project category requirements under AFOLU Requirements Section 4.2.3 and 4.2.4. This public comment has been sufficiently satisfied (Item 96).
Section 4.1.4: Please specify it is included under IFM.	Comment is incorrect. Conservation/Avoided Deforestation aligns only with APD (Avoiding Planned Deforestation) because it requires conversion to non-forest land use which is not eligible under IFM. We will include a bracket next to Conservation / Avoided Deforestation stating "(equivalent to VCS project subcategory Avoided Planned Deforestation	This comment has been addressed in the revised applicability conditions and project boundary which correctly refers Project Proponents to the IFM project category requirements under AFOLU Requirements Section 4.2.3 and 4.2.4. This public comment has been sufficiently satisfied (Item 96).

	(APD))".	
Section 5.2.2, Part 7: I have not seen the issue of double-counting across scopes of regulated entities (for BC in particular) widely discussed. This issue could be important for fertilizer production, transportation, and milling, to name a few examples.	Issues of double counting are managed programmatically by the VCS Standard. No action is required.	The assessment team agrees that this issue is programmatic and is naturally addressed through the mechanisms in place during a VCS project validation/verification.
Section Table 8, PP10, Land Use Shifting Leakage: This statement is not factually correct. IFM can result in activity shifting land use change internally by a landowner increasing land use conversion for other properties.	The leakage example outlined in the comment is already covered under internal land use shifting leakage, but that category is identified as irrelevant to IFM under the current requirements. We will update Table 8 and Table 14 to recognize that land use shifting leakage is potentially relevant for IFM projects.	"Land use shifting leakage" has been renamed properly to "activity shifting leakage" and is now properly addressed and defined in Section 8.3.1.1 of the methodology per AFOLU Requirements 4.6.1. This public comment has been sufficiently addressed (Item 179).
Section Table 8, PP10, Harvest Shifting Leakage: The term "market leakage" employed by VCS should also be used here.	The requirements laid out in this methodology under external harvest shifting leakage satisfy the requirement for market leakage and therefore the terms align. No action is required.	"Harvest shifting leakage" has been renamed to "market leakage" per VCS Program Definitions. This sufficiently satisfies the public comment.
Section Table 8, PE16, bullet 3: This is a highly speculative statement without any evidence to provide basis in fact and therefore does not belong in a methodology.	The comment is correct. This statement is not a methodological conclusion. We will remove the bullet from the methodology.	The statement identified by the public commenter has been properly removed.
Section Table 8, PE16, bullet 4: This issue of regulatory scope does not apply to this methodology as used under	The comment is correct. This statement is not a methodological conclusion. We will	The statement identified by the public commenter has been properly removed.

VCS. Market effect leakage must be addressed by this methodology.	remove the bullet from the methodology.	
Section 6.1.4.3: Baseline environmental practices not falling below common practice is specifically mentioned in VCS AFOLU 4.4.5 and should be re-itinerated here.	This comment is irrelevant here. The methodology does meet the requirements of AFOLU 4.4.5 by requiring projects to "assess whether or not in the absence of the project, the land would continue to be managed according to historic forest management practices by considering at minimum common forest management practices." No action is required.	FCOP has been revised since inception to include appropriate criteria for determining the baseline (Item 108).
Section 6.1.4.4, paragraph 2: This identification of alternatives to the project scenario and additionality approach should not be unique to avoided conversion but should apply to all forest carbon projects. A more common Section for selecting areas unique to avoided deforestation involves a selection of reference areas which typically must be in the same vicinity, based upon commonalities of geophysical and ecological commonalities, legal requirements, as well as agents and drivers of conversion.	The comment correctly identifies that the requirements of the WRI/WBCSD project-specific barriers test approach should apply to all applicable project types. However the other Sections of the methodology establish criteria for baseline setting and additionality that are equivalent, although they do not contain this specific reference. No action is required.	The methodology uses the CDM "Combined tool to identify the baseline scenario and demonstrate additionality in A/R CDM project activities" for establishing alternative scenarios. This tool is robust enough to account for all approaches including reference area commonalities. Revisions to the methodology after the public comment period also support resolution of this public comment (Item 108).
Section 6.1.4.4, paragraph 1: VCS AFOLU 4.4.6 "The baseline for REDD projects is comprised of a land-use	This comment is addressed in the final bullet on page 72 of the methodology requiring	The public comment has been addressed in Section 7.1.2 of the methodology, where

and land-cover (LU/LC) change component and a carbon stock change component." Projections may be employed but they are also typically combined with reference areas or comparison approaches to indicate the validity of the projections over time.	the project to consider "development activities undertaken with the geographical region that includes the project". No action is required.	projections are one factor considered in the description of alternative baseline scenarios. This public comment is sufficiently satisfied in revisions to the methodology post public comment period.
Section 6.1.4.3, paragraph 2: Performance benchmark and project based historical approaches are the only two eligible baseline approaches for IFM under VCS AFOLU 4.4.5. Please modify the projection-based approach in regards to performance benchmarks. A comparison based approach is not among the VCS endorsed IFM baseline approaches.	This comment is incorrect because the comparison based approach outlined in this methodology would be aligned with VCS requirements in AFOLU 4.4.5 "where the Project Proponent (and implementing partner, if applicable) is a new owner or management entity with no history of logging practices in the project region, the baseline shall reflect the local common practices and legal requirements." No action is required.	This public comment is no longer relevant as the methodology has been revised to confirm that performance benchmarks will not be applicable, as this is a project-based methodology. This is consistent with AFOLU Requirements for IFM Section 4.4.5..
Section 7.1: I strongly suggest that this Section be more closely aligned with the CDM methodological tool for the demonstration and assessment of additionality, V 5.2, accepted by VCS.	The requirements laid out in this methodology do address the VCS Standard's additionality requirements considering regulatory surplus, implementation barrier and common practice barriers. The methodology requires regulatory surplus. The financial barriers described in the methodology correspond to VCS's investment barriers and	Revisions to the methodology have incorporated more details regarding VCS Standard additionality requirements in Section 7. This public comment has been sufficiently satisfied during the methodology second assessment process (Items 28, 51, 53 & 54).

	the non-financial barriers correspond to VCS's technical or institutional barriers. The methodology considers common practice barriers in the requirements for baseline selection.	
Section 8.1.1, b) paragraph 1: The methodology should require an error such as 90% +/-10 that should be used in terms of field sampling 0.5% of project area to confirm model accuracy, to provide some quantitative guidelines to Project Proponents.	The approach outlined in 8.1.1.1b relies on existing VRI (Vegetation Resource Inventory) data, which is based on remote sensing analysis calibrated through extensive field sampling, plus well calibrated existing models for forest stand behaviour. The methodology provides sufficient details to ensure modeling results are conservative and substantiated. Directly requiring field sampling of 0.5% of the project area would make this approach no different from 8.1.1.1a, Field Sampling Method, and is excessively conservative in light of the quality of inventory and modeling available. Using a higher level of field sampling would ignore the contribution of the modeling and inventory information available in BC and effectively counteract the benefit of having these tools.	The methodology estimates uncertainty using the IPCC Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories and has confirmed that applied confidence intervals are in line with VCS Standard Section 4.1.4, "Where a methodology applies a 90 percent confidence interval and the width of the confidence interval exceeds 20% of the estimated value or where a methodology applies a 95 percent confidence interval and the width of the confidence interval exceeds 30% of the estimated value, an appropriate confidence deduction shall be applied." The addition or deduction of the estimated value from the confidence interval is used in quantification of carbon in the sample carbon pool (Item 3).

Section 8.1.1.2, last paragraph: Please make a note of the requirements in Section VCS AFOLU 4.5.3 regarding long term average GHG accounting under harvesting. Note that long term does not have the same meaning under VCS: For ARR or IFM projects undertaking even-aged management, the time period over which the long-term GHG benefit is calculated shall include at minimum one full harvest/cutting cycle, including the last harvest/cut in the cycle. For example, where a project crediting period is 40 years and has a harvest cycle of 12 years, the long-term average GHG benefit will be determined for a period of 48 years.	This comment correctly states that the methodology does not use the exact VCS terminology, but the approach described in this methodology does align with the intensions of AFOLU 4.5.3 to ensure that "the maximum number of GHG credits available to projects shall not exceed the long-term average GHG benefit." No action is required.	This public comment has been addressed and is included in Section 8.4.1 of the methodology. The time period for long term GHG benefits under ARR or IFM project scenarios is now specific to AFOLU Requirements Section 4.5.3.
Section 8.1.1.4 storage < 100 years: How will this 100 year timeframe be reconciled with the VCS crediting period of 20 years and project period of 30 years minimum? This reconciliation should be explicit.	This comment is incorrect because VCS requirements do align with a 100-year definition of permanence. No action is required.	FCOP now requires the use of the VCS Non-Permanence Risk Tool (Item 128), which addressed the public comment.
Section 8.3.1: How was the provincial base case external harvest shifting leakage estimates derived?	The commenter missed the fact that the requested information is provided in Appendix C. However, a change is required because the first sentence of page 138 refers to Appendix D when it should reference Appendix C, which was the probable cause of the confusion.	This public comment is addressed in Appendix A "The Provincial Base Case Approach for Addressing Leakage from Forest Carbon projects".
Section 10, paragraph 1: All	The issues regarding	The methodology uses

text that doesn't apply to the VCS tool should be excluded. You should specify the degree of correspondence with VCS non-permanence risk tool, including buffer withholding and release and how this should be calculated based on VCS text.	permanence are managed through the VCS Non-Permanence Risk Assessment and VCS Pooled Buffer Account. The methodology references these tools but essentially permanence is programmatically managed by the VCS. No action is required.	the CDM "Combined tool to identify the baseline scenario and demonstrate additionality in A/R CDM project activities" for establishing alternative scenarios. Revisions to the methodology after the public comment period also support resolution of this public comment.

The assessment team concludes that the methodology developer has taken due account of comments received from stakeholders and implemented appropriate changes to the methodology accordingly.

3.3   Structure and Clarity of Methodology

The FCOP methodology and supporting documentation were reviewed by the assessment team for clarity and logical consistency in accordance with VCS rules for methodology assessments (Methodology Approval Process v3.5, 08 October 2013). Methodology developers have followed the VCS template and included the specific criteria and procedures in the appropriate sections. The terminology used in the methodology is consistent with the VCS Program and GHG accounting and language chosen is precise. Specific key terms were used appropriately; must, should, and may to indicate a firm requirement and permissible or allowable options, respectively. Key words for outlining mandatory requirements are used consistently for permissible or allowable options. Criteria and procedures for the methodology were written by the developers in a clear, concise and coherent manner to allow the project to be unambiguously audited by the assessment team.

In adapting the FCOP methodology as a VCS methodology the developers have achieved a structurally sound document with sufficient clarity to facilitate its use by Project Proponents.

3.4   Definitions

The key terms defined in the methodology are presented clearly and appropriately in a definition section toward the beginning of the document (Section 3) for ease of use by Project Proponents. The comprehensive list of terms relevant to the methodology is ordered alphabetically, and definitions for acronyms are provided. Definitions of key terms are presented concisely and assist the reader in comprehension for effective implementation of the methodology.

3.5   Applicability Conditions

The methodology includes the following applicability conditions to ensure adherence to VCS rules and requirements and to address specific issues that arose in the methodology assessment process.

The second assessment determined that the applicability conditions contained within the methodology are appropriate, adequate and in compliance with the VCS rules. The results of the assessment are summarized:

Applicability Conditions	Assessment Team Findings
1. Projects must be located within the Province of British Columbia, Canada.	This condition is consistent with the designing of the methodology to be applicable to British Columbia and the British Columbia Forest Offset Guide Version 1.0. The applicability condition is clearly and concisely written sufficient for Project Proponents to assess if a project meets the condition. Condition can be demonstrated at time of project validation using maps and GIS.
2. Project start date must be no earlier than 5 years before completion of validation.	This condition is in accordance with the VCS Standard Section 3.8.2. The applicability condition is clearly and concisely written sufficient for Project Proponents to assess if a project meets the condition. Condition can be demonstrated at time of project validation through comparison to VCS start date requirements.

3. Project activities must comply with all applicable laws and regulations, including but not limited to the BC Emissions Offset Regulation	This condition is written in a sufficiently clear manner to ensure that all project activities do not lead to the violation of any applicable law or regulation per AFOLU Requirements Section 3.1.3. Condition can be demonstrated at project validation through research of regulations, documentation and on-site visit.
4. Project activities must not be mandated by any law, statute, or other regulatory framework	This condition ensures that the project activities are not mandated in accordance with Regulatory Surplus for the Project Test in calculations of Additionality per VCS Standard Section 4.6.1. The applicability condition is clearly and concisely written sufficient for Project Proponents to assess if a project meets the condition. Condition can be demonstrated at project validation through research of regulations and review of documentation.
5. Project activities must not include actions expected to significantly impact the hydrology of any site within the *project area*, including but not limited to flood irrigation or drainage.	This condition is not required by a specific AFOLU requirement but is necessary to ensure environmental common practiced in BC is followed. The applicability condition is clearly and concisely written sufficient for Project Proponents to assess if a project meets the condition. Condition can be demonstrated at project validation through review of topographic maps, gauges, onsite visit and additional relevant demonstrations.
6. Where a project involves planting, the project must use genetically diverse and productive seed stock, and is expected to apply the BC Chief Forester's Standards for Seed Use	This condition pertains to provincial requirements which require specific seed sources and characteristics (http://www.for.gov.bc.ca/code/cfstandards/). The condition is written precisely to ensure that conformance is demonstrated at the time of project validation. Condition can be demonstrated at project validation through review of the Standards for Seed Use, purchase order documentations for stock and site visit.
7. This protocol applies only to the following VCS project categories: • Afforestation, Reforestation and Revegetation (ARR) • Improved Forest Management – Reduced Impact Logging (IFM – RIL) • Improved Forest Management – Logged to Protected Forests	The VCS project categories applicable to this methodology are appropriate and allow for demonstrable conformance at the time of project validation per AFOLU Requirements Section 4.2. The applicability condition is clearly and concisely written sufficient for Project Proponents to assess if a project meets the condition.

(IFM – LtPF) • Improved Forest Management – Extended Rotation Age (IFM – ERA) • Improved Forest Management – Low to High Productivity (IFM – LtHP) • Reduced Emissions from Deforestation and Degradation – Avoided Planned Deforestation (REDD – APD)	
8. Projects in the following project categories must also meet the stated applicability conditions ARR a) Project proponent must demonstrate that the *project area* has not been *forest land* for at least 20 years prior to project commencement. b) No legal requirement may exist to re-establish a forest within the *project area* on which ARR activities will take place IFM a) *Project area* must be *forest land* at the time of project commencement. REDD a) *Project area* must be *forest land* at the time of project commencement, and must have been *forest land* for not less than 10 years prior to the project start date	• The VCS project categories applicable to this methodology are appropriate and allow for demonstrable conformance at the time of project validation per AFOLU Requirements Section 4.2. • For REDD projects, FCOP did not previously reference IPCC 2003 nor any internationally accepted definition of forest. In FCOP, to be eligible for REDD, project lands must meet the definition of Forest Land (25% crown closure and 5m tall at maturity) at project commencement. This is different than VCS, which requires, amongst other things, that a forest must qualify as a forest for a minimum of 10 years before the project start date. The FCOP has been amended to include a 10-year minimum forest state prior to project start date. The applicability conditions are clearly and concisely written sufficient for Project Proponents to assess if a project meets the condition. Conditions can be demonstrated at project validation by review of historic and current aerial or satellite imagery and review of legal requirements within the legal jurisdiction.

3.6 Project Boundary

The VCS Standard requires that the methodology element establish criteria and procedures for describing the project boundary and identifying and selecting optional carbon pools, i.e. sources,

sinks, and reservoirs relevant to the baseline and project scenarios. Procedures to quantify emissions are included for each of these pools and sources in projects that can demonstrate significance in using the appropriate VCS tools. The methodology addresses the establishment of geographic boundaries to meet VCS AFOLU Requirements Section 4.2 for ARR, IFM and REDD project categories. Mandatory and optional sources, sinks and pools (SSPs) (Table 5) in this methodology are chosen for controlled, related or affected (C/R/A) situations based on the relation to the project proponent:

- **Affected SSP:** A GHG *source*, *sink*, or *carbon pool* influenced by a project activity through changes in market demand or supply for associated products or services, or through physical displacement.

- **Controlled SSP:** A GHG *source*, *sink*, or *carbon pool* whose operation is under the direction and influence of the proponent through financial, policy, management or other instruments.

- **Related SSP:** A GHG *source*, *sink*, or *carbon pool* that has material or energy flows into, out of, or within the project

The terminology used to define carbon SSPs for this methodology are slightly different than used by the VCS Program and in essence represent subcategories. The following table presents a brief review of all considered carbon SSPs, and assessment findings:

Pool	Justification/Comments	Assessment Findings
PP1 Standing Live Trees	Major *on-site controlled* pool considered when accounting for standing live trees, which includes all above ground biomass	This pool is appropriately chosen for all project categories and is consistent with AFOLU Requirements Section 4.3.1.
PP2 Shrubs and Herbaceous Understory	*On-site controlled* pool used for above-ground live woody (i.e. herbaceous) and other biomass that does not meet definition of standing live trees. This pool is included where project activities significantly reduce the pool and the exclusion or inclusion can be properly justified.	This is a sub-component of PP1 (above-ground tree biomass) and is consistent with Table 2 of AFOLU Requirements Section 4.3.1. This pool is appropriately significant in ARR project scenarios because of the likelihood of residual biomass left behind and burned by agents of deforestation per AFOLU Requirements Section 4.3.7. This pool appropriately does not account for live biomass unused for wood products in IFM project scenarios per AFOLU Requirements Section

		4.3.12. The pool is optional for all REDD project scenarios due to the likelihood of live biomass removal. For REDD and ARR project scenarios live biomass may be deemed *de minimis* and not accounted for per AFOLU Requirements 4.3.3.
PP3 Live Roots	An *on-site controlled* pool representing portions of living trees, shrubs or herbaceous biomass located below-ground.	A sub-component of AFOLU pool below-ground biomass. This pool is appropriately significant in ARR project scenarios because of the likelihood that carbon stock may change due to implementation of the project activity. IFM project scenarios and REDD-APD (crop/pasture baselines) are appropriately optional when live roots are deemed *de minimis* from project activities per AFOLU Requirements 4.3.3. This pool must be included in REDD-APD urban development because those project activities involve removal of live roots.
PP4 Standing Dead Trees	This *on-site controlled* pool depends on occurrence of standing dead trees including stem, branches, roots, or stumps.	This pool is related to AFOLU pool dead wood and carbon stock in this pool may change due to the implementation of the project activity. This pool is appropriately significant in ARR project scenarios because of the likelihood of project activities which reduce deadwood per AFOLU Requirements Section 4.3.7. This pool is appropriately required in IFM project scenarios RIL, and LtPF because these activities reduce the amount of timber extracted per unit area and thus reduce the dead wood pool per AFOLU Requirements Section 4.3.14. Other IFM and REDD-APD (crop/pasture) project scenarios are appropriately optional when

		standing dead trees are deemed *de minimis*. This pool is appropriately required for REDD-APD urban development because those project activities involve removal of dead wood.
PP5 Lying Dead Wood	An *on-site controlled* pool depending on occurrence of any piece(s) of *dead wood* material from a tree, e.g. dead boles, limbs, and large root masses, on the ground in forest stands	This pool is related to AFOLU pool dead wood and carbon stock in this pool may change due to the implementation of the project activity. This pool is appropriately significant in ARR project scenarios because of the likelihood of project activities which reduce deadwood per AFOLU Requirements Section 4.3.7. This pool is appropriately required in IFM project scenarios RIL, and LtPF because these activities reduce the amount of timber extracted per unit area and thus reduce the dead wood pool per AFOLU Requirements Section 4.3.14. Other IFM and REDD-APD (crop/pasture) project scenarios are appropriately optional when standing dead trees are deemed *de minimis*. This pool is appropriately required for REDD-APD urban development because those project activities involve removal of dead wood.
PP6 Litter and Forest Floor	An *on-site controlled* pool depending on occurrence of any piece(s) of *dead wood* material from a tree, e.g., dead boles, limbs, and large root masses, on the ground in forest stands that is smaller than material identified as lying *dead wood*	This pool is related to AFOLU pool litter, and carbon stock in this pool may change due to implementation of the project activity. In IFM project scenarios, this pool is appropriately significant when carbon stocks are demonstrated to be the same or more under the project and baseline scenarios. This pool is appropriately omitted under REDD-APD crop/pasture scenarios and optional (deemed *de minimis*) under REDD-APD urban development scenarios

		per AFOLU Requirements 4.3.17.
PP7 Soil	This *on-site controlled* pool includes below-ground carbon not included in other pools, to a depth appropriate considering the full project-specific soil profile and potential project effects on soils	This pool is related to AFOLU pool soil and carbon stock in this pool may change due to implementation of the project activity. For all project scenarios, this pool is appropriate when soil disturbance surpasses the threshold set by the BC Soils of the Forest and Range Practices Act in Forest Planning and Practices Regulation.
PP8 Harvested Wood Products In Use	This *on-site controlled* pool includes wood that is harvested or otherwise collected from the forest, transported outside the forest project boundary, and being processed or in use, but excluding harvested wood that has been landfilled	This pool is related to AFOLU pool wood products and carbon stock in this pool may change due to implementation of the project activity. This pool was deemed necessary for all project scenarios unless deemed *de minimis* under the criteria that changes in carbon stocks are less than 5% of the total GHG benefit by the project. Accounting for wood products still in use in certain project scenarios is appropriate because of the forest product export orientation in BC.
PP8 Harvested Wood Products In Landfill	This *on-site controlled* pool includes wood that is harvested or otherwise collected from the forest, transported outside the forest project boundary, and landfilled	This pool is related to AFOLU pool wood products and carbon stock in this pool may change due to implementation of the project activity. This pool was deemed necessary for all project scenarios unless deemed *de minimis* under the criteria that changes in carbon stocks are less than 5% of the total GHG benefit by the project. Accounting for landfill wood product decay in certain project scenarios is appropriate because of the forest product export orientation in BC.

PE3 Fossil Fuel Production	This *up-stream related source* of emissions is the result of extraction and production of fossils fuels used to operate vehicles and equipment throughout the project.	This source of emissions is not explicitly necessary under AFOLU Requirements Section 4.3.3, but was appropriately chosen because it pertains to changes in emissions associated with project forest management activities.
PE4 Fertilizer Production	This *up-stream related source* of emissions is the result of raw material extraction through to final production of fertilizers that are used throughout the project.	This source of emissions is not noted as explicitly necessary per AFOLU Requirements Section 4.3.3, but was appropriately chosen because it pertains to changes in emissions associated with fertilizer production. Intensive forest management often requires the use of large amounts of fertilizer.
PE6 Transport of Material, Equipment, Inputs, and Personnel to Site	This *up-stream related source* of emissions is the result of transportation of all construction materials, equipment, inputs, and personnel to the project site as required during the project.	This source of emissions is necessary per AFOLU Requirements Section 4.3.3 and was appropriately chosen because it pertains to transportation needs of IFM project forest management activities.
PE7 Fossil Fuel Combustion – Vehicles and Equipment	This *on-site controlled source* of emissions is the result of vehicles and equipment which burn fossil fuels.	This source of emissions is differentiated from PE6 by being specific to fossil fuel use by vehicles and it is required per AFOLU Requirements Section 4.3.3. It was appropriately chosen because IFM forest management activities involve increased use of equipment (i.e. mechanized harvester).
PE8 Biomass Combustion	This *on-site controlled source* of emissions is the result of combustion of harvested forest biomass at the project site for various purposes, including for heating or as part of land clearing.	This source of emissions was necessary per AFOLU Requirements Section 4.3.3 and was appropriately chosen because it pertains to removal or burning of herbaceous vegetation in ARR, IFM, and REDDS project scenarios.

PE9 Fertilizer Use Emissions	This *on-site controlled source* of emissions is from N$_2$O fertilizer application.	This source of emissions is necessary per AFOLU Requirements Section 4.3.3 and was appropriately chosen because it pertains to changes in emissions associated with fertilizer or manure application in ARR, IFM, and REDD project scenarios.
PE10 Forest Fire Emissions	This *on-site controlled source* of emissions is from combustion of forest *carbon pools* in place due to natural fire events as well as human induced fire events (e.g. accident, arson, etc.)	The methodology recognizes that projects focused exclusively on forest fire reduction are not eligible under IFM.
PE11 Harvested Wood Transport	This *down-stream controlled source* of emissions is from the transport of harvested wood from the forest to the processing site, and of finished wood products to the end user.	This source of emissions is not explicitly necessary under AFOLU Requirements Section 4.3.3, but was appropriately chosen because it pertains to changes in emissions associated with project forest management activities.
PE12 Harvested Wood Processing	This *down-stream controlled source* of emissions is from energy used to process wood from raw logs to finished product.	This source of emissions is not explicitly necessary under AFOLU Requirements Section 4.3.3, but was appropriately chosen because it pertains to changes in emissions associated with project forest management activities.
PE13 Harvested Wood Combustion	This *down-stream controlled source* of emissions is from combustion of harvested wood for energy.	This source of emissions is not explicitly necessary under AFOLU Requirements Section 4.3.3, but was appropriately chosen because it pertains to changes in emissions associated with project forest management activities.
PE15 Harvested Wood Products and Residuals Anaerobic Decay	This *down-stream controlled source* of emissions is methane resulting from the decomposition of wood product under anaerobic conditions in landfills.	This source of emissions is not explicitly necessary under AFOLU Requirements Section 4.3.3, but was appropriately chosen because it pertains to changes in emissions associated with project forest

		management activities.
PP8 Changes in Forest Carbon and Wood Product Pools Located Outside of the Project Boundary that are Indirectly Affected by the Project Activity	This *affected SSP source* of emissions is the result of forest *carbon pools* lying outside of the project boundary as a result of project activities causing activity shifting or market effects	The methodology sufficiently establishes a specific carbon pool to account for leakage per AFOLU Requirements Section 4.6.1. This carbon pool is a sum of relevant project scenario carbon pools and appropriately addresses the AFOLU Requirements to calculate leakage.
PE16 Emissions Located Outside of the Project Boundary that are Indirectly Affected by the Project Activity	This *affected SSP source* of emissions is the result of changes in the use of fossil fuels or fertilizers outside of the project boundary as a result of project activities causing activity shifting or market effects	The methodology sufficiently establishes a specific carbon pool to account for leakage per AFOLU Requirements Section 4.6.1. This carbon pool is a sum of relevant project scenario carbon pools and appropriately addresses the AFOLU Requirements to calculate leakage.

Supporting tables taken from the methodology helps with selection of pools and emission sources depending on the project category:

	ARR	IFM-RIL (<25% impact on total timber extracted)	IFM-RIL (>=25% impact on total timber extracted)	IFM - LtPF	IFM - ERA	IFM - LtHP	REDD - APD (Annual crop as baseline)	REDD - APD (Pasture grass as baseline)	REDD- APD (Urban/ development/ infrastructure as baseline
Above-ground tree biomass (PP 1)	Y	Y	Y	Y	Y	Y	Y	Y	Y
Above-ground non-tree biomass (PP 2)	S	N	N	N	N	N	O	O	O
Below ground biomass (Live roots) (PP 3)	S	O	O	O	O	O	O	O	Y
Litter and forest floor (PP 6)	S	S (Note 1)	S (Note 1)	S (Note 1)	S (Note 1)	S (Note 1)	N	N	O
Dead wood (standing PP 4 and lying PP 5)	S	Y	Y	Y	O	O	O	O	Y
Soil (PP 7)	S (Note 2)	S (Note 2)	S (Note 2)	S (Note 2)	S (Note 2)	S (Note 2)	S (Note 2)	S (Note 2)	S (Note 2)
Harvested wood products (In use PP 8 and in landfill PP 9)	Y	Y	Y	Y	Y	Y	Y	Y	Y

Codes		
	Y	Must be accounted
	S	Must be accounted where project activities may significantly reduce the pool or increase the emission. Optional otherwise.
	O	Accounting is optional
	N	In general, the carbon pool or emission need not be accounted, unless failure to account the pool or emission would potentially result in an overstimation of the GHG benefits of the project

Notes		
	1	Unless it can be shown that the project will involve the same or more carbon being stored in this pool in the project area under the project scenario as compared with the baseline scenario
	2	Required if the project exceeds the soil disturbance limits set out in Section 35 (3), Part 4, Practice Requirements, Division 1 — Soils of the Forest and Range Practices Act, Forest Planning and Practices Regulation , regardless of whether or not the Regulation would otherwise apply to the project area.

	ARR	IFM-RIL (<25% impact on total timber extracted)	IFM-RIL (>=25% impact on total timber extracted)	IFM - LtPF	IFM - ERA	IFM - LtHP	REDD - APD (Annual crop as baseline)	REDD - APD (Pasture grass as baseline)	REDD- APD (Urban/ development/ infrastructure as baseline
Emissions from production of fuels and fertilizers (PE 3 and PE 4)	S (Note 3)	S (Note 3)	S (Note 3)	S (Note 3)	S (Note 3)	S (Note 3)	S (Note 3)	S (Note 3)	S (Note 3)
Emissions from power equipment and transport (PE 6 and PE 7)	Y	S (Note 3)	S (Note 3)	S (Note 3)	S (Note 3)	Y	S	S	S
Emissions from fertilizer application (PE 9)	Y	N	N	N	N	Y	N	N	N
Emissions from biomass burning and forest fires (PE 8 and PE 10)	O (note 4)	O (note 4)	O (note 4)	O (note 4)	O (note 4)	O (note 4)	O (note 4)	O (note 4)	O (note 4)
Harvested wood transport (PE 11)	S (Note 3)	Y	Y	Y	Y	S (Note 3)	Y	Y	Y
Harvested wood processing (PE 12)	S (Note 3)	Y	Y	Y	Y	S (Note 3)	Y	Y	Y
Harvested wood products and residuals anaerobic decay (PE 15)	S (Note 3)	Y	Y	Y	Y	S (Note 3)	Y	Y	Y
Harvest shifting leakage (PP 10 in part)	N	O (Note 5)	O (Note 5)	O (Note 5)	O (Note 5)	O (Note 5)	Y	Y	Y
Land use shifting leakage (PP 10 in part)	Y	Y	Y	Y	Y	N	Y	Y	Y

Codes		
	Y	Must be accounted
	S	Must be accounted where project activities may significantly reduce the pool or increase the emission. Optional otherwise.
	O	Accounting is optional
	N	In general, the carbon pool or emission need not be accounted, unless failure to account the pool or emission would potentially result in an overstimation of the GHG benefits of the project

Notes		
	3	Required if project emissions exceed baseline emissions
	4	Required if project emissions from biomass burning exceed baseline emissions from biomass burning
	5	Required where the project results in a decrease in HWP production relevant to the baseline

3.7 Baseline Scenario

Criteria and procedures in the methodology for determination of the baseline scenario are appropriate for compatible project activities. The methodology, following a project-based method, uses the Clean Development Mechanism (CDM) "Combined tool to identify the baseline scenario and demonstrate additionality in A/R CDM project activities". This particular tool includes a step-wise approach for selection of the most likely and conservative baseline scenario depending on the amount of information available to generate baseline estimations. Applying the CDM tool allows for transparent identification of baseline scenarios and encouraging conservative baseline net greenhouse gas removals by reductions. The tool is implemented for use in both baseline scenario and additionality determination.

The procedures used in the methodology element to determine the baseline scenario are appropriate, adequate, and in compliance with VCS rules (VCS Standard and AFOLU Requirements). Specifically:

- As per the VCS Standard Section 4.1.9, the methodology appropriately invokes project-based methods for all project scenarios.

- As per the VCS Standard Section 4.5.1 (1), the methodology appropriately takes into account the identified relevant GHG sources, sinks and reservoirs.

- As per the VCS Standard Section 4.5.1(2), the methodology considers the alternative project types by requiring Project Proponents to provide a plausible description of alternative scenarios to the project activity. Identification of alternate scenarios is determined in part by; historical operating history, less intensive environmental practices than are common practice in the area or other realistic information which can determine present or future conditions (i.e. legislative, technical, economic, socio-cultural, environmental, geographic, site-specific and temporal factors).

- As per the VCS Standard Sections 4.5.1(3) and 4.5.1(4), during the methodology assessment ESI reviewed all aspects of the baseline scenario, and the project as a whole, within the context of data availability, reliability and limitations and other relevant information (including future conditions, technical, legal, environmental, temporal and site-specific) and found it to be sufficient.

- As per AFOLU Requirements Section 4.4.4 (1), the methodology requires operational history of the project area and if a new owner or management entity is present, procedures are established to identify the most plausible scenario.

- As per AFOLU Requirements Section 4.4.4 (2), the methodology adheres to mandatory applicable legal and regulatory requirements, even in cases where laws have differing objectives than GHG reductions.

- As per AFOLU Requirements Section 4.4.4 (3), the methodology ensures that baseline environmental practices are not below common practice of landowners in the area by using a specific common practice analysis.

- As per AFOLU Requirements Section 4.4.7 (1), the methodology requires Project Proponents to demonstrate that the project area was intended to be cleared and accounts for common practice activities and characteristics of plausible agents of deforestation.

3.8   Additionality

The methodology satisfies VCS rules for providing a procedure to demonstrate additionality by requiring projects to use the latest version of the Clean Development Mechanism (CDM) "Combined tool to identify the baseline scenario and demonstrate additionality in A/R CDM project activities." Demonstration of project additionality allows for transparent identification of baseline scenarios and encouraging conservative baseline net greenhouse gas removals by reductions. The CDM tool is appropriate for the project activities covered by the methodology as it provides steps to assess identification of alternative land use scenarios, investment or barriers analysis, and common practice analysis. Legality and conservativeness applicability conditions

are appropriately selected to initiate the additionality tool. The methodology further requires that at least one driver of conversion be accounted for in a "common practice test" to demonstrate that the driver would not have been considered had the project not been implemented. The procedures for demonstrating additionality are appropriate, adequate and conform to VCS rules.

3.9   Quantification of GHG Emission Reductions and Removals

3.9.1   Baseline Emissions

Procedures for quantifying baseline emissions for eligible project activities are determined by baseline type and selected carbon pools as per the AFOLU Requirements Section 4.5 and described in the methodology Section 8.0.1. Baseline emissions are calculated from relevant forest carbon pools and emission sources or removals, including harvested wood products (HWP). Default factors chosen within Section 8.0.1 of the methodology were assessed at length and were confirmed to be consistent with VCS requirements. Further, default factors appropriately follow AFOLU Requirements by project activity and reference IPCC 2006 Guidelines for National GHG Inventories Procedures.

Two equations are provided in the methodology to determine total baseline emissions or removals by GHG, and emissions from baseline sources. The methodology provides appropriate procedures for calculation of specific pools and amounts of specific emissions. The pools covered under section 8.0.1 include:

Section 8.0.1.1
- PP1/BP1 Standing Live Trees

- PP2/BP2 Shrubs and Herbaceous Understory

- PP3/BP3 Live Roots

- PP4/BP4 Standing Dead Trees

- PP5/BP5 Lying Dead Wood

- PP6/BP6 Litter & Forest Floor

- PP7/BP7 Soil

Procedures for baseline emissions and removals include options for either periodic direct measurement on single stands or simple forest estates (option A), or projection of project area inventories, disturbance events and stand types using suitable stand level growth and/or carbon models, with some minimum amount of periodic direct observation (option B). In option A the procedures provided for direct measurement were reviewed and were found sufficient to ensure conformance with VCS requirements. Option A does require the use of models to convert to amounts of stored carbon in relevant forest pools, where the areas of the strata and sampled results for the pools are the inputs replacing the results of the growth and yield, forest estate and landscape dynamics models used in Option B. For both option A and option B the methodology does not specify required models for use; however, it does provide appropriate and detailed guidance sufficient for model selection (Section 8.0.1.1.2) along with a list of commonly used growth models for BC. At validation project proponents must justify the appropriateness of the model selected, ensure consistency with Section 3.1.4 of the VCS Standard and if more than one model is used, they must justify how models are linked. The methodology also provides

requirements for modifying models based on localized, project area-specific considerations. Both approaches (A and B) were reviewed and found to be appropriate for the project activities covered by the methodology and while specific models are not mandated, it does provide sufficient to ensure that at project validation any models selected will be validated to be in conformance with VCS requirements, specifically Sections 3.1.4 and 4.1.6 of the VCS Standard.

Where soil carbon (PP7/BP7) is a mandatory or selected pool, there are two options. Project proponents may employ a forest carbon model that includes the ability to quantify changes in soil carbon between the baseline and project over time. Alternatively they may choose to sample (field or model based) using industry standards which is then paired with the forest carbon model selected. The methodology requires justification for the method selected and a demonstration that the approach is conservative. At validation developers will have to ensure consistency with section 3.1.4 of the VCS Standard. The approach for assessing soil carbon was reviewed in detail and was found to be appropriate for the project activities and in conformance with VCS requirements.

The methodology includes criteria for quantifying loss events, both anticipated and unanticipated. Anticipated events will be accounted for within the modelling of the baseline, while unanticipated events will be identified through monitoring. A net impact of the loss event below the baseline emissions reductions and removal enhancements for that reporting period is defined as a reversal, which is essentially equivalent to a reversal as defined by the VCS Program Definitions.

Section 8.0.1.2
- PP8/BP8 Harvested Wood Products in Use
- PP9/BP9 Harvested Wood Products in Landfill

For harvested wood products (HWP) in use and in landfills, the methodology provides two approaches. The first is the "default" approach which provides standard tables and procedures to calculate HWP and associated methane emissions. The second approach, defined as "advanced", provides a process for project developers to tailor the values derived from the default approach to the specific product mix. In the default approach the methodology references Skog along with Dymond and Winjum, ensuring conformance with section 4.5.12 of the AFOLU. The advanced approach relies upon good records of either the deliveries by mill type or product type, which will be reviewed and approved at project validation. The methodology further provides a table for the fraction of CO_2 remaining in-use and in landfill per year, by product category. All calculations, defaults and processes for the quantification of HWP were reviewed in detail and were found to be appropriate for the project activities and in conformance with VCS requirements.

Section 8.0.2.2. PE3/BE3 Fossil Fuel Production
Emissions from production of on-site fossil fuel production are calculated using the standard emission factor X activity level approach which utilizes an equation from IPCC guidelines. This is consistent with the requirements of VCS AFOLU section 4.5.1.

Section 8.0.2.3. PE4/BE4 Fertilizer Production
Emissions from fertilizer production are calculated using the standard emission factor X activity level approach which utilizes an equation from IPCC guidelines. This is consistent with the requirements of VCS AFOLU section 4.5.1.

Section 8.0.2.4. PE6/BE6 Transport of Material, Equipment, Inputs, and Personnel to Site
Emissions from transport of material, equipment, inputs, and personnel to site are calculated using the standard emission factor X activity level approach which utilizes an equation from IPCC guidelines. This is consistent with the requirements of VCS AFOLU section 4.5.1.

Section 8.0.2.5. PE7/BE7 Fossil Fuel Combustion – Vehicles and Equipment
Emissions from fossil fuel combustion – vehicles and equipment are calculated using the standard emission factor X activity level approach which utilizes an equation from IPCC guidelines. This is consistent with the requirements of VCS AFOLU section 4.5.1.

Section 8.0.2.6. PE8/BE8 Biomass Combustion
Emissions from biomass combustion are calculated using the standard emission factor X activity level approach which utilizes an equation from IPCC guidelines. This is consistent with the requirements of VCS AFOLU Section 4.5.1. The methodology appropriately follows AFOLU Requirements Section 4.5.12, where biomass burning or nitrogen use follows IPCC 2006 guidelines.

Section 8.0.2.7. PE9/BE9 Fertilizer Use Emissions
Emissions from fertilizer use are calculated using a modified version of the IPCC Guidelines and the CDM A/R Methodological Tool "Estimation of direct nitrous oxide emission from nitrogen fertilization". The modification was required to accommodate notational differences and to add a time-dependant parameter to allow allocation of emissions on an annual basis. As per section 4.5.1 of the VCS AFOLU, the use of the CDM tool and IPCC guidelines confirms consistency with the Good Practice Guidance document.

Section 8.0.2.8. PE10/BE10 Forest Fire Emissions
Emissions from forest fires are calculated using the standard emission factor X activity level approach which utilizes an equation from IPCC guidelines. This is consistent with the requirements of VCS AFOLU section 4.5.1.

Section 8.0.2.9. PE11/BE11 Harvested Wood Transport
Emissions from harvested wood transport are calculated using the same standard emission factor X activity level approach for PE6/BE6 above which utilizes an equation from IPCC guidelines, however it includes a modification to ensure that $C_{m,g,\,t}$ refers to the total quantity of harvested wood transported. This is consistent with the requirements of VCS AFOLU section 4.5.1.

Section 8.0.2.10. PE12/BE12 Harvested Wood Processing
Emissions from harvested wood processing are calculated using the standard emission factor X activity level approach which utilizes an equation from IPCC guidelines. This is consistent with the requirements of VCS AFOLU section 4.5.1.

Section 8.0.2.11. PE15/BE15 Harvested Wood Products and Residuals Anaerobic Decay
Emissions from harvested wood products and residuals anaerobic decay are calculated essentially the same as PP8/BP8 Harvested Wood Products in Use PP9/BP9 Harvested Wood Products in Landfill, with the exception that the appropriate default (Table 14) and advance approach (Table 15) tables are referenced. All calculations, defaults and processes for the

quantification of HWP were reviewed in detail and were found to be appropriate for the project activities and in conformance with VCS requirements.

The baseline emissions equations encompass all GHG sources, sinks, and carbon pools as specified by the delineated project boundary. The assessment team concludes that methods for calculation of baseline emissions are appropriate, adequate and in compliance with VCS rules.

3.9.2   Project Emissions

Procedures for quantifying project emissions for eligible project activities are determined by project type and selected carbon pools per AFOLU Requirements Section 4.5 and described in the methodology Section 8. Section 3.9.1 of this report contains assessment and discussion of project emissions and removal following VCS rules.

Project emissions are calculated from relevant forest carbon pools and emission sources or removals, including harvested wood products (HWP). Adequate procedures are in place to quantify carbon stocks within project boundaries according to pool. Pools and emission sources are appropriately summed separately, including harvested wood products. Following AFOLU Requirements Section 4.5.5, loss of carbon due to harvesting is accounted for in the quantification of project emissions, and GHG benefits do not exceed the long-term average. The methodology follows AFOLU Requirements Section 4.5.1 where the stock change approach was employed and in adherence to IPCC 2006 guidelines.

Default factors chosen within Section 8.0.1 of the methodology for project case accounting were assessed at length and were confirmed to be consistent with VCS requirements. Further, default factors appropriately follow AFOLU Requirements by project activity and reference IPCC 2006 Guidelines for National GHG Inventories Procedures.

Parameters and equations to calculate project emissions were checked and found to be appropriate and without error. The assessment team found that the procedures for calculating project emissions cover all GHG sources, sinks and reservoirs and are adequate and in compliance with VCS rules.

3.9.3   Leakage

Leakage is defined in this methodology by displacement of activities or a change in the output of certain goods or services from the project area and resulting effects in the project area leakage buffer. This leakage definition and procedures for computing leakage emissions are in compliance with AFOLU requirements Section 4.6 for the project activities covered by the methodology.

Leakage in the methodology is appropriately separated into two forms. Activity-shifting leakage is calculated from a leakage emissions equation and the optional market-based leakage is estimated from the area and default values. Methodology Sections 8.3.1.1 and 8.3.1.2 adequately address the AFOLU Requirements Section 4.6. Following AFOLU Requirements Section 4.6.6, leakage mitigation measures for prevention of significant increases in GHG emissions is accounted for as a qualitative determination or deemed *de minimis* or conservatively excluded. Methodology Sections 8.3.1.1 and 8.3.1.2 adequately address the AFOLU requirements Section

4.6.6. Section 8.3.1 of the methodology is in compliance with AFOLU Requirements Section 4.6.13 where a demonstration of no internal activity shifting leakage can occur.

Following AFOLU Requirements Section 4.6.2, the methodology provided sufficient criteria for exclusion of leakage accounting. Section 8.3.1.1 of the methodology is in compliance with AFOLU Requirements Section 4.6.15 (a & b) where identification of leakage agents specifies emissions estimates. Procedures for special examples of leakage agents are appropriately given, for example where land ownership is granted to a conservation organization. Estimates of market leakage in Section 8.3.1.2 of the methodology appropriately follow AFOLU Requirements Section 4.6.4 by specifying methods for quantification. Further, the methodology allows for conservative estimates of market leakage outside of Canada due to global market conditions.

The methodology is in proper compliance with AFOLU Requirements for the project activities it covers. The procedures for calculating leakage are appropriate and adequate for the project activities covered by the methodology.

3.9.4   Net GHG Emission Reductions and Removals

Any uncertainties associated with the quantification of net GHG emission reductions and removals are addressed appropriately.

The methodology calls for quantifying net GHG emissions reductions and removals in each monitoring period by subtracting gross reductions and removals from the buffer amount allocation. Uncertainty is addressed appropriately through the use of weighted standard errors of estimates from the baseline emissions models and carbon stock measurements. All equations presented were reviewed thoroughly and methodology Equation 37 is correct following AFOLU Requirements Section 4.7.1. Equations are also consistent with industry practices for GHG accounting and IPCC 2006 guidance documentation.

Following AFOLU Requirements Section 4.5.5, as stated, the methodology places credit issuance at the long term average and specific to the approved project activity.

The methods for calculation of emission reductions and removals from the methodology Section 8 are appropriate and adequate for the project activities covered by the methodology and are in compliance with AFOLU Requirements, Section 4.7.1 and 4.7.2.

3.10   Monitoring

The assessment team confirmed that the data, parameters and procedures for monitoring are appropriate for eligible project activities covered by FCOP. A summary of procedures for monitoring of all data and parameters is provided below.

Data and Parameters Available at Validation

Data/Parameter:	*%Leakage$_{Market}$*
Data unit:	% - the unit is appropriate in accordance and consistence with the AFOLU Requirements, v3.4 (Section 4.6.14).

Source of data:	The source of the data is the Provincial Leakage Base Cases (Appendix A of FCOP), which are simple projects reflective of offset projects in the respective regions of BC.
Value applied:	Various – the various values applied are reflective of the results of the base cases.
Justification of choice of data or description of measurement methods and procedures applied:	The sources were established by the BC provincial government and are based on the government's analysis of leakage for forest products.
Purpose of data:	The parameter is appropriate, as leakage is required to be calculated in FCOP.

Data/Parameter:	C_R & C_N
Data unit:	tC – the tonne is the standard measure for GHG accounting.
Source of data:	The source is appropriate, as it is based on a conservative assumption that $C_R = C_N$, when it is more likely that $C_R > C_N$ based on favorable growing conditions in BC forests.
Value applied:	Value applied is 1, and it is appropriate because it designates and equivalency between C_R and C_N, as discussed above.
Justification of choice of data or description of measurement methods and procedures applied:	The justification is appropriate because it is based on conservative assumptions, in line with the VCS Program and Standard, Section 4.8.3.
Purpose of data:	The purpose is appropriate, as it is a needed parameter in the leakage equation.

Data/Parameter:	dq_x, q_x
Data unit:	Factor – the factor is derived from peer-reviewed data. See below.
Source of data:	The source is based on peer-reviewed, scientific data that has been widely sourced across North America, in line with Section 4.8.2 of the VCS Standard.
Value applied:	Various – the various factors are sourced from the peer-reviewed literature and contain broad classes of softwood lumber data (Appendix B of FCOP).
Justification of choice of data or description of measurement methods and procedures applied:	The justification is in line with Section 4.8.2 of the Standard.
Purpose of data:	The purpose is appropriate, as it is a needed parameter in the leakage equation.

Data/Parameter:	e
Data unit:	% - the unit is appropriate in accordance and consistence with the AFOLU Requirements, v3.4 (Section 4.6.14).
Source of data:	The source is based on peer-reviewed, scientific data and is appropriate as it is the most recent paper on price elasticity for BC forest products.
Value applied:	Various – the various factors are sourced from the peer-reviewed literature and are appropriate as described above.
Justification of choice of data or description of measurement methods and procedures applied:	The justification is in line with Section 4.8.2 of the Standard.

Purpose of data:	The purpose is appropriate, as it is a needed parameter in the leakage equation.

Data/Parameter:	E
Data unit:	% - the unit is appropriate in accordance and consistence with the AFOLU Requirements, v3.4 (Section 4.6.14).
Source of data:	The source is based on peer-reviewed, scientific data and is appropriate as it is the most recent paper on price elasticity for BC forest products.
Value applied:	Various – the various factors are sourced from the peer-reviewed literature and are appropriate as described above.
Justification of choice of data or description of measurement methods and procedures applied:	The justification is in line with Section 4.8.2 of the Standard.
Purpose of data:	The purpose is appropriate, as it is a needed parameter in the leakage equation.

Data/Parameter:	EF_1
Data unit:	Tonne N_2O-N / tonne N input - the tonne is the standard measure for GHG accounting.
Source of data:	The source is appropriate, as it is from the 2006 IPCC Guidelines for National Greenhouse Gas Inventories, in accordance with Section 4.8.2 of the Standard.
Value applied:	0.01 – the value is appropriate, as it is the default given from the IPCC Guidelines.
Justification of choice of data or description of measurement methods and procedures applied:	The justification is appropriate, as it is based on the default value in the IPCC Guidelines.
Purpose of data:	The purpose is appropriate, as it is a needed parameter in the calculation of baseline and project emissions.

Data/Parameter:	EF_4
Data unit:	tN_2O-N / (tNH_3-N + tNO_x-N volatilised) - the tonne is the standard measure for GHG accounting.
Source of data:	The source is appropriate, as it is from the 2006 IPCC Guidelines for National Greenhouse Gas Inventories, in accordance with Section 4.8.2 of the Standard.
Value applied:	0.01 – the value is appropriate, as it is the default given from the IPCC Guidelines.
Justification of choice of data or description of measurement methods and procedures applied:	The justification is appropriate, as it is based on the default value in the IPCC Guidelines.
Purpose of data:	The purpose is appropriate, as it is a needed parameter in the calculation of baseline and project emissions.

Data/Parameter:	EF_5
Data unit:	tN_2O-N / tN in leaching or runoff - the tonne is the standard measure for GHG accounting.
Source of data:	The source is appropriate, as it is from the 2006 IPCC Guidelines for National Greenhouse Gas Inventories, in accordance with Section 4.8.2 of the Standard.

Value applied:	0.0075 – the value is appropriate, as it is the default given from the IPCC Guidelines.
Justification of choice of data or description of measurement methods and procedures applied:	The justification is appropriate, as it is based on the default value in the IPCC Guidelines.
Purpose of data:	The purpose is appropriate, as it is a needed parameter in the calculation of baseline and project emissions.

Data/Parameter:	$f_{C, wood}$
Data unit:	Tonne / tonne - the tonne is the standard measure for GHG accounting.
Source of data:	The source is appropriate, as it is from the 2006 IPCC Guidelines for National Greenhouse Gas Inventories, in accordance with Section 4.8.2 of the Standard.
Value applied:	0.5 – the value is appropriate, as it is the default given from the IPCC Guidelines.
Justification of choice of data or description of measurement methods and procedures applied:	The justification is appropriate, as it is based on the default value in the IPCC Guidelines.
Purpose of data:	The purpose is appropriate, as it is a needed parameter in the calculation of baseline and project emissions.

Data/Parameter:	$Frac_{GASF}$
Data unit:	$(tNH_3\text{-}N + tNO_x\text{-}N \text{ volatilised})/tN$ applied - the tonne is the standard measure for GHG accounting.
Source of data:	The source is appropriate, as it is from the 2006 IPCC Guidelines for National Greenhouse Gas Inventories, in accordance with Section 4.8.2 of the Standard.
Value applied:	0.1 – the value is appropriate, as it is the default given from the IPCC Guidelines.
Justification of choice of data or description of measurement methods and procedures applied:	The justification is appropriate, as it is based on the default value in the IPCC Guidelines.
Purpose of data:	The purpose is appropriate, as it is a needed parameter in the calculation of baseline and project emissions.

Data/Parameter:	$Frac_{GASM}$
Data unit:	$(tNH_3\text{-}N + tNO_x\text{-}N \text{ volatilised})/tN$ applied - the tonne is the standard measure for GHG accounting.
Source of data:	The source is appropriate, as it is from the 2006 IPCC Guidelines for National Greenhouse Gas Inventories, in accordance with Section 4.8.2 of the Standard.
Value applied:	0.2 – the value is appropriate, as it is the default given from the IPCC Guidelines.
Justification of choice of data or description of measurement methods and procedures applied:	The justification is appropriate, as it is based on the default value in the IPCC Guidelines.
Purpose of data:	The purpose is appropriate, as it is a needed parameter in the calculation of baseline and project emissions.

Data/Parameter:	$Frac_{LEACH\text{-}(H)}$

Data unit:	tN/tN added or deposited by grazing animals - the tonne is the standard measure for GHG accounting.
Source of data:	The source is appropriate, as it is from the 2006 IPCC Guidelines for National Greenhouse Gas Inventories, in accordance with Section 4.8.2 of the Standard.
Value applied:	0.3 (if soil water holding capacity is exceeded) or 0 – the value is appropriate, as it is the default given from the IPCC Guidelines.
Justification of choice of data or description of measurement methods and procedures applied:	The justification is appropriate, as it is based on the default value in the IPCC Guidelines.
Purpose of data:	The purpose is appropriate, as it is a needed parameter in the calculation of baseline and project emissions.

Data/Parameter:	GWP_j
Data unit:	tCO_2e / $tGas_j$ - the tonne is the standard measure for GHG accounting.
Source of data:	The source of GWP_j from the BC Government can only be used for non-VCS projects; however, the IPCC value must be used for all VCS projects.
Value applied:	Various – various values are applied based on whether project utilizes FCOP under VCS or not.
Justification of choice of data or description of measurement methods and procedures applied:	For VCS projects, the justification is appropriate, as it is based on the default value in the IPCC Guidelines.
Purpose of data:	The purpose is appropriate, as it is a needed parameter in the calculation of leakage, baseline, and project emissions.

Data/Parameter:	$HWPCH4fact_{X,t-y}$
Data unit:	tCO_2e / t wood biomass delivered - the tonne is the standard measure for GHG accounting.
Source of data:	The sources are based on peer-reviewed, scientific data and are appropriate as they are the most recent papers on carbon storage for HWPs in BC (Dymond, 2012) or offshore markets (Winjum, et al 1998).
Value applied:	Various – the various factors are sourced from the peer-reviewed literature and are appropriate as described above.
Justification of choice of data or description of measurement methods and procedures applied:	The justification is in line with Section 4.8.2 of the Standard.
Purpose of data:	The purpose is appropriate, as it is a needed parameter in the calculation of baseline and project emissions.

Data/Parameter:	$HWPfact_{NA,t-y}$
Data unit:	% - the unit is appropriate in accordance and consistence with the AFOLU Requirements, v3.4.
Source of data:	The sources are based on peer-reviewed, scientific data and are appropriate as they are the most recent papers on carbon storage/emissions for HWPs in BC (Dymond, 2012) or U.S markets (Skog, 2008).
Value applied:	Various – the various factors are sourced from the peer-reviewed literature and are appropriate as described above.

Justification of choice of data or description of measurement methods and procedures applied:	The justification is in line with Section 4.8.2 of the Standard.
Purpose of data:	The purpose is appropriate, as it is a needed parameter in the calculation of baseline and project emissions.

Data/Parameter:	$HWPfact_{O,t-y}$
Data unit:	% - the unit is appropriate in accordance and consistence with the AFOLU Requirements, v3.4.
Source of data:	The sources are based on peer-reviewed, scientific data and are appropriate as they are the most recent papers on carbon storage/emissions for HWPs in BC (Dymond, 2012), U.S markets (Skog, 2008), or offshore markets (Winjum, et al 1998).
Value applied:	Various – the various factors are sourced from the peer-reviewed literature and are appropriate as described above.
Justification of choice of data or description of measurement methods and procedures applied:	The justification is in line with Section 4.8.2 of the Standard.
Purpose of data:	The purpose is appropriate, as it is a needed parameter in the calculation of baseline and project emissions.

Data/Parameter:	T_x
Data unit:	%- the unit is appropriate as it is based on a proportion and in accordance and consistence with the AFOLU Requirements, v3.4.
Source of data:	The source of the data is BC Government data on timber harvest by region (Appendix A of FCOP). This is based on actual government data and is thus appropriate in line with Section 4.8.2 of the Standard.
Value applied:	Values given in Appendix E of FCOP – the various values applied are reflective of the government data.
Justification of choice of data or description of measurement methods and procedures applied:	The sources were established by the BC provincial government and are based on the government's records of timber harvests by region.
Purpose of data:	The parameter is appropriate, as leakage is required to be calculated in FCOP.

Data/Parameter:	wdf_s
Data unit:	t/m^3 – this is a standard unit for wood density, in line with the calculations in FCOP.
Source of data:	The source is based on peer-reviewed, scientific data and is appropriate as a widely published study on research results for wood densities of Canadian forests.
Value applied:	Various – the various factors are sourced from the peer-reviewed literature and are appropriate as described above.
Justification of choice of data or description of measurement methods and procedures applied:	The justification is in line with Section 4.8.2 of the Standard.
Purpose of data:	The purpose is appropriate, as it is a needed parameter in the calculation of leakage, baseline, and project emissions.

Data/Parameter:	*HWPfact*
Data unit:	% - the unit is appropriate in accordance and consistence with the AFOLU Requirements, v3.4.
Source of data:	The sources are based on peer-reviewed, scientific data and are appropriate as they are the most recent papers on carbon storage/emissions for HWPs in BC (Dymond, 2012), U.S markets (Skog, 2008), or offshore markets (Winjum, et al 1998).
Value applied:	Various – the various factors are sourced from the peer-reviewed literature and are appropriate as described above (See Table 9 of FCOP).
Justification of choice of data or description of measurement methods and procedures applied:	The justification is in line with Section 4.8.2 of the Standard. As this is a default factor in FCOP, it will be periodically re-assessed, in accordance with Section 4.1.7 of the Standard.
Purpose of data:	The purpose is appropriate, as it is a needed parameter in the calculation of baseline and project emissions.

Data/Parameter:	*HWPCH4fact*
Data unit:	% - the unit is appropriate in accordance and consistence with the AFOLU Requirements, v3.4.
Source of data:	The sources are based on peer-reviewed, scientific data and are appropriate as they are the most recent papers on carbon storage/emissions for HWPs in BC (Dymond, 2012), U.S markets (Skog, 2008), or offshore markets (Winjum, et al 1998).
Value applied:	Various – the various factors are sourced from the peer-reviewed literature and are appropriate as described above (See Table 14 of FCOP).
Justification of choice of data or description of measurement methods and procedures applied:	The justification is in line with Section 4.8.2 of the Standard. As this is a default factor in FCOP, it will be periodically re-assessed, in accordance with Section 4.1.7 of the Standard.
Purpose of data:	The purpose is appropriate, as it is a needed parameter in the calculation of baseline and project emissions.

Data/Parameter:	*%Leakage$_{Market}$*
Data unit:	% - the unit is appropriate in accordance and consistence with the AFOLU Requirements, v3.4.
Source of data:	The source is based on peer-reviewed, scientific data and is appropriate.
Value applied:	Various – the various factors are sourced from the peer-reviewed literature and are appropriate (See Section 8.3.1.2.3 of FCOP).
Justification of choice of data or description of measurement methods and procedures applied:	The justification is in line with Section 4.8.2 of the Standard. As this is a default factor in FCOP, it will be periodically re-assessed, in accordance with Section 4.1.7 of the Standard.
Purpose of data:	The purpose is appropriate, as it is a needed parameter in the leakage equation.

Data and Parameters Monitored

Data/Parameter:	$AL_{b,t}$
Data unit:	tonnes of biomass fuel combusted, or other unit with appropriate conversion factor to t - the tonne is the standard measure for GHG accounting. If other units are used, they must be converted to tonnes appropriately (Section 4.8.4 of VCS Standard).
Source of data:	Field measurement – source established in line with VCS Standard, Section 4.8.5.
Description of measurement methods and procedures to be applied:	The description is in line with VCS module VMD0031 Estimation of Emissions from Burning.
Frequency of monitoring/recording:	The frequency of monitoring is appropriate, as monitoring is required after each combustion event, which will ensure documentation of all associated emissions.
QA/QC procedures to be applied:	The requirement for QA/QC is appropriate, as it ensures a qualified professional will oversee data collection, calculation, and other activities.
Purpose of data:	The purpose is appropriate, as it is a needed parameter in the calculation of project emissions.
Calculation method:	The VMD0031 module is approved by VCS. Thus, the calculation method is appropriate.

Data/Parameter:	$AL_{f,t}$
Data unit:	t, or other mass unit with appropriate conversion factor - the tonne is the standard measure for GHG accounting. If other units are used, they must be converted to tonnes appropriately (Section 4.8.4 of VCS Standard).
Source of data:	The source of the data is fertilizer purchase and inventory records, which is appropriate because direct accounting of fertilizer will occur.
Description of measurement methods and procedures to be applied:	The description of measurement is standard accounting of inventory at beginning and ending of reporting period, which is appropriate, as direct accounting will occur.
Frequency of monitoring/recording:	The frequency of monitoring appropriately allows the fertilizer inventory and purchases to be accounted for during the reporting period.
QA/QC procedures to be applied:	The requirement for QA/QC is appropriate, as it ensures a qualified professional will oversee data collection, calculation, and other activities.
Purpose of data:	The purpose is appropriate, as it is a needed parameter in the calculation of project emissions.
Calculation method:	The calculation method is standard accounting and is the most accurate method to account for fertilizer inventory and purchases.

Data/Parameter:	$AL_{f,e,t}$ & $AL_{fu,t}$
Data unit:	Volumetric measure (e.g. l, m^3, etc.) or mass measure (kg, t, etc.) with appropriate conversion – the units will be specific to whatever data is available on fuel use but then converted to tonne-equivalents, which is in line with FCOP and Section

	4.8.4 of VCS Standard.
Source of data:	The source of data is appropriate, as it requires actual fuel consumption records and does not allow estimates.
Description of measurement methods and procedures to be applied:	Measurement methods are based on the tracking and transcription of fuel consumption records and must be directly related to the amount of fuel consumed. Thus, the description is appropriate for accurate accounting of fuel consumption.
Frequency of monitoring/recording:	The frequency of monitoring is continuous, as all records must be kept, which is appropriate for direct accounting of fuel consumption.
QA/QC procedures to be applied:	The requirement for QA/QC is appropriate, as it ensures a qualified professional will oversee data collection, calculation, and other activities.
Purpose of data:	The purpose is appropriate, as it is a needed parameter in the calculation of project emissions.
Calculation method:	No actual calculation is required. However, a simple transcription from fuel consumption records will be used, which ensures accurate accounting of fuel use. No estimation is allowed.

Data/Parameter:	$AL_{ff, t}$
Data unit:	t of forest biomass combusted, or other unit with appropriate conversion factor to t - the tonne is the standard measure for GHG accounting. If other units are used, they must be converted to tonnes appropriately (Section 4.8.4 of VCS Standard).
Source of data:	The source requires measurement and monitoring of areas impacted by fire events, in line with the quantification methodologies of FCOP and requiring the utilization of guidance in the VCS module VMD0031.
Description of measurement methods and procedures to be applied:	The description is appropriate, as it requires measurement of the area impacted and estimation of biomass prior to the fire event and measurement or modelling of biomass consumed in event.
Frequency of monitoring/recording:	The frequency of monitoring is appropriate, as monitoring is required after each combustion event, which will ensure documentation of all associated emissions.
QA/QC procedures to be applied:	The requirement for QA/QC is appropriate, as it ensures a qualified professional will oversee data collection, calculation, and other activities.
Purpose of data:	The purpose is appropriate, as it is a needed parameter in the estimation/calculation of baseline/project emissions.
Calculation method:	The calculation method relies on VCS module VMD0031, which is in line with Section 4.8.2 of the VCS Standard.

Data/Parameter:	$AL_{H, t}$
Data unit:	t, or other unit with appropriate conversion factor to t - the tonne is the standard measure for GHG accounting. If other units are used, they must be converted to tonnes

	appropriately (Section 4.8.4 of VCS Standard).
Source of data:	The source requires monitoring of areas of harvest, in line with the quantification methodologies of FCOP.
Description of measurement methods and procedures to be applied:	The description appropriately requires the use of scaling records, which will accurately quantify harvested wood products.
Frequency of monitoring/recording:	The frequency of monitoring is appropriate, as monitoring is required after each harvest, which will ensure accurate accounting of all HWPs.
QA/QC procedures to be applied:	The requirement for QA/QC is appropriate, as it ensures a qualified professional will oversee data collection, calculation, and other activities.
Purpose of data:	The purpose is appropriate, as it is a needed parameter in the calculation of project emissions.
Calculation method:	The calculation method is standard summation of scaling records and is the most accurate method to account for HWPs removed from project area.

Data/Parameter:	$AI_{m,t}$
Data unit:	Persons, items or tonnes, as appropriate – the units are appropriate and allow flexibility for the various project activity scenarios that may occur. They will ultimately be converted to tonne-equivalents, in line with Section 4.8.4 of the VCS Standard.
Source of data:	The source of data is direct monitoring of project's transportation activities, which will ensure accurate accounting of project emissions.
Description of measurement methods and procedures to be applied:	The description appropriately requires the use of all management records, which will accurately quantify project emissions associated with transportation.
Frequency of monitoring/recording:	The frequency of monitoring is appropriate, as continuous monitoring is needed to ensure accurate accounting of all emissions associated with transportation.
QA/QC procedures to be applied:	The requirement for QA/QC is appropriate, as it ensures a qualified professional will oversee data collection, calculation, and other activities.
Purpose of data:	The purpose is appropriate, as it is a needed parameter in the calculation of project emissions.
Calculation method:	The calculation method is standard summation of management records and is the most accurate method to account for project emissions associated with transportation in the project area.

Data/Parameter:	$C_{ap,t}$
Data unit:	tC - the tonne is the standard measure for GHG accounting (Section 4.8.4 of VCS Standard).
Source of data:	The source of data is direct sampling or modelling of project's various required pools, which will ensure accurate accounting of project emissions. Further, Section 9.3 of FCOP requires conservative estimates to be used, in line with Section 4.8.3 of the VCS Standard.

Description of measurement methods and procedures to be applied:	The description is appropriate, as it requires the measurement or monitoring of the pool at time t (Section 8.0.1.1) of FCOP. This is in line with Section 4.8 of the VCS Standard.
Frequency of monitoring/recording:	The frequency is appropriate, as it requires monitoring/modelling at every reporting period, which will ensure accurate and conservative estimates.
QA/QC procedures to be applied:	The requirement for QA/QC is appropriate, as it ensures a qualified professional will oversee data collection, calculation, and other activities.
Purpose of data:	The purpose is appropriate, as it is a needed parameter in the calculation of project emissions.
Calculation method:	The calculation methods vary depending on option chosen, but they are appropriately in line with Section 4.8 of the VCS Standard.

Data/Parameter:	$C_{m,g,t}$
Data unit:	Tonnes (or volume or other relevant units converted to tonnes) - the tonne is the standard measure for GHG accounting (Section 4.8.4 of VCS Standard).
Source of data:	The source of the data is purchase and personnel records, which are appropriate because direct accounting of items/personnel transported will occur.
Description of measurement methods and procedures to be applied:	The description appropriately requires the use of all transport records, which will accurately quantify project emissions associated with transportation.
Frequency of monitoring/recording:	The frequency of monitoring is appropriate, as continuous monitoring is needed to ensure accurate accounting of all emissions associated with transport.
QA/QC procedures to be applied:	The requirement for QA/QC is appropriate, as it ensures a qualified professional will oversee data collection, calculation, and other activities.
Purpose of data:	The purpose is appropriate, as it is a needed parameter in the calculation of project emissions.
Calculation method:	The calculation method is standard summation of management records and is the most accurate method to account for project emissions associated with transport in the project area.

Data/Parameter:	$D_{m,g}$
Data unit:	Kilometers – the unit is in line with national distance estimates in BC.
Source of data:	The source is routing information or estimation from shipping routes/maps. These are appropriate as the only way to measure distances travelled.
Description of measurement methods and procedures to be applied:	The measurement methods are estimating distance from shipping routes and maps with internet-based maps, etc. This is a common and effective means to calculate distance.
Frequency of monitoring/recording:	The frequency is in line with the principles of VCS, as monitoring/recording will occur at least every reporting period.

QA/QC procedures to be applied:	The requirement for QA/QC is appropriate, as it ensures a qualified professional will oversee data collection, calculation, and other activities.
Purpose of data:	The purpose is appropriate, as it is a needed parameter in the calculation of project emissions.
Calculation method:	There is no actual calculation method, as the parameter will be established from mapping/routing distance tools.

Data/Parameter:	$EF_{b,j}$
Data unit:	t / t of biomass - the tonne is the standard measure for GHG accounting (Section 4.8.4 of VCS Standard).
Source of data:	The sources will be based on BC Reporting Regulation; National Inventory Reports; or peer-reviewed, scientific data specific to the site. If no site specific data is available, then IPCC guidelines must be used. The source is appropriately in line with Section 4.8.2 of the VCS Standard.
Description of measurement methods and procedures to be applied:	The measurement methods come from external sources indicated above, in line with Section 4.8.2 of the VCS Standard.
Frequency of monitoring/recording:	The frequency is appropriate, as it requires monitoring/recording at every reporting period, which will ensure accurate and conservative estimates.
QA/QC procedures to be applied:	The requirement for QA/QC is appropriate, as it ensures a qualified professional will oversee data collection, calculation, and other activities.
Purpose of data:	The purpose is appropriate, as it is a needed parameter in the calculation of project emissions and estimation of baseline emissions.
Calculation method:	There is no actual calculation method, as the parameter will be established from various sources, depending on site-specific data availability, and the sources are appropriately in line with Section 4.8 of the VCS Standard.

Data/Parameter:	$EF_{f,j}$
Data unit:	t / t - the tonne is the standard measure for GHG accounting (Section 4.8.4 of VCS Standard).
Source of data:	The sources will be based on BC Reporting Regulation; National Inventory Reports; or peer-reviewed, scientific data specific to the site. If no site specific data is available, then IPCC guidelines must be used. The source is appropriately in line with Section 4.8.2 of the VCS Standard.
Description of measurement methods and procedures to be applied:	The measurement methods come from external sources indicated above, in line with Section 4.8.2 of the VCS Standard.
Frequency of monitoring/recording:	The frequency is appropriate, as it requires monitoring/recording at every reporting period, which will ensure accurate and conservative estimates.
QA/QC procedures to be applied:	The requirement for QA/QC is appropriate, as it ensures a qualified professional will oversee data collection, calculation, and other activities.
Purpose of data:	The purpose is appropriate, as it is a needed parameter in the calculation of project emissions and estimation of

	baseline emissions.
Calculation method:	There is no actual calculation method, as the parameter will be established from various sources, depending on site-specific data availability, and the sources are appropriately in line with Section 4.8 of the VCS Standard.

Data/Parameter:	$EF_{f,e,j}$
Data unit:	t / unit of fuel - the tonne is the standard measure for GHG accounting (Section 4.8.4 of VCS Standard).
Source of data:	The sources will be emission factors approved for use in BC (See Section 8.0.2.5 of FCOP).
Description of measurement methods and procedures to be applied:	The measurement methods come from external sources indicated above, in line with Section 4.8.2 of the VCS Standard.
Frequency of monitoring/recording:	The frequency is appropriate, as it requires monitoring/recording at every reporting period, which will ensure accurate and conservative estimates.
QA/QC procedures to be applied:	The requirement for QA/QC is appropriate, as it ensures a qualified professional will oversee data collection, calculation, and other activities.
Purpose of data:	The purpose is appropriate, as it is a needed parameter in the calculation of project emissions and estimation of baseline emissions.
Calculation method:	There is no actual calculation method, as the parameter will be developed from the approved source – appropriately in line with Section 4.8 of the VCS Standard.

Data/Parameter:	$EF_{ff,j}$
Data unit:	t / t - the tonne is the standard measure for GHG accounting (Section 4.8.4 of VCS Standard).
Source of data:	The sources will be based on BC Reporting Regulation; National Inventory Reports; or peer-reviewed, scientific data specific to the site. If no site specific data is available, then IPCC guidelines must be used. The source is appropriately in line with Section 4.8.2 of the VCS Standard.
Description of measurement methods and procedures to be applied:	The measurement methods come from external sources indicated above, in line with Section 4.8.2 of the VCS Standard.
Frequency of monitoring/recording:	The frequency is appropriate, as it requires monitoring/recording at every reporting period, which will ensure accurate and conservative estimates.
QA/QC procedures to be applied:	The requirement for QA/QC is appropriate, as it ensures a qualified professional will oversee data collection, calculation, and other activities.
Purpose of data:	The purpose is appropriate, as it is a needed parameter in the calculation of project emissions and estimation of baseline emissions.
Calculation method:	There is no actual calculation method, as the parameter will be established from various sources, depending on site-specific data availability, and the sources are appropriately in line with Section 4.8 of the VCS Standard.

Data/Parameter:	$Ef_{fu,j}$
Data unit:	t / unit of fuel - the tonne is the standard measure for GHG accounting (Section 4.8.4 of VCS Standard).
Source of data:	The sources will be based on BC Reporting Regulation; National Inventory Reports; or peer-reviewed, scientific data specific to the site. The source is appropriately in line with Section 4.8.2 of the VCS Standard.
Description of measurement methods and procedures to be applied:	The measurement methods come from external sources indicated above, in line with Section 4.8.2 of the VCS Standard.
Frequency of monitoring/recording:	The frequency is appropriate, as it requires monitoring/recording at every reporting period, which will ensure accurate and conservative estimates.
QA/QC procedures to be applied:	The requirement for QA/QC is appropriate, as it ensures a qualified professional will oversee data collection, calculation, and other activities.
Purpose of data:	The purpose is appropriate, as it is a needed parameter in the calculation of project emissions and estimation of baseline emissions.
Calculation method:	There is no actual calculation method, as the parameter will be developed from the approved sources – appropriately in line with Section 4.8 of the VCS Standard.

Data/Parameter:	$Ef_{H,j}$
Data unit:	t / t - the tonne is the standard measure for GHG accounting (Section 4.8.4 of VCS Standard).
Source of data:	The sources of data are based on actual accounting of monitored emissions at production facilities (if under the control of the Project Proponent), or standard BC emissions factors, in line with Section 4.8.2 of the VCS Standard.
Description of measurement methods and procedures to be applied:	The description is described above and is in line with Section 4.8.2 of the VCS Standard.
Frequency of monitoring/recording:	The frequency is appropriate, as it requires monitoring/recording at every reporting period, which will ensure accurate and conservative estimates.
QA/QC procedures to be applied:	The requirement for QA/QC is appropriate, as it ensures a qualified professional will oversee data collection, calculation, and other activities.
Purpose of data:	The purpose is appropriate, as it is a needed parameter in the calculation of project emissions and estimation of baseline emissions.
Calculation method:	There is no actual calculation method, as the parameter will be developed from the approved sources – appropriately in line with Section 4.8 of the VCS Standard.

Data/Parameter:	$Ef_{m,j}$
Data unit:	t / unit - the tonne is the standard measure for GHG accounting (Section 4.8.4 of VCS Standard).
Source of data:	The sources of data are based on standard BC emissions factors, in line with Section 4.8.2 of the VCS Standard.
Description of measurement methods	The description is described above and is in line with Section

and procedures to be applied:	4.8.2 of the VCS Standard.
Frequency of monitoring/recording:	The frequency is appropriate, as it requires monitoring/recording at every reporting period, which will ensure accurate and conservative estimates.
QA/QC procedures to be applied:	The requirement for QA/QC is appropriate, as it ensures a qualified professional will oversee data collection, calculation, and other activities.
Purpose of data:	The purpose is appropriate, as it is a needed parameter in the calculation of project emissions and estimation of baseline emissions.
Calculation method:	There is no actual calculation method, as the parameter will be developed from the approved sources – appropriately in line with Section 4.8 of the VCS Standard.

Data/Parameter:	FE_m
Data unit:	unit of fuel per distance (e.g., l diesel / 100 km) – units will be equivalent to national units of measure and are thus appropriate by VCS Standards.
Source of data:	The source is vehicle records or fuel consumption data from recognized sources. These are appropriate as an accurate method to measure fuel economy.
Description of measurement methods and procedures to be applied:	The measurement methods are referring to actual fuel records, if under Project Proponent control, or default values recognized by national standards, in line with the VCS Standard.
Frequency of monitoring/recording:	The frequency is in line with the principles of VCS, as monitoring/recording will occur over five years or every reporting period.
QA/QC procedures to be applied:	The requirement for QA/QC is appropriate, as it ensures a qualified professional will oversee data collection, calculation, and other activities.
Purpose of data:	The purpose is appropriate, as it is a needed parameter in the calculation of project emissions.
Calculation method:	There is no actual calculation method, as the parameter will be established from records or fuel consumption standards (note: a ratio may be used depending on data source).

Data/Parameter:	$GHG_{j,\ Baseline\ Forest\ Pools,\ t}$
Data unit:	tCO_2 - the tonne is the standard measure for GHG accounting (Section 4.8.4 of VCS Standard).
Source of data:	The source is calculated from sampling or modelled in line with VCS principles.
Description of measurement methods and procedures to be applied:	Measurement methods are described in Section 8.0.1.1 of the methodology. These methods are in line with VCS principles.
Frequency of monitoring/recording:	The frequency is appropriate, as it requires monitoring/recording/modelling at every reporting period, which will ensure accurate and conservative estimates.
QA/QC procedures to be applied:	The requirement for QA/QC is appropriate, as it ensures a qualified professional will oversee data collection, calculation, and other activities.

Purpose of data:	The purpose is appropriate, as it is a needed parameter in the estimation of baseline emissions.
Calculation method:	The calculation methods were vetted during the assessment process and are in line with Section 4.8.4 of VCS Standard.

Data/Parameter:	$GHG_{j,\ Project\ Forest\ Pools,\ t}$
Data unit:	tCO_2 - the tonne is the standard measure for GHG accounting (Section 4.8.4 of VCS Standard).
Source of data:	The source is calculated from sampling or modelled in line with VCS principles.
Description of measurement methods and procedures to be applied:	Measurement methods are described in Section 8.0.1.1 of the methodology. These methods are in line with VCS principles and must be consistent for both project and baseline accounting.
Frequency of monitoring/recording:	The frequency is appropriate, as it requires monitoring/recording/modelling at every reporting period, which will ensure accurate and conservative estimates.
QA/QC procedures to be applied:	The requirement for QA/QC is appropriate, as it ensures a qualified professional will oversee data collection, calculation, and other activities.
Purpose of data:	The purpose is appropriate, as it is a needed parameter in the calculation of project emissions.
Calculation method:	The calculation methods were vetted during the assessment process and are in line with Section 4.8.4 of VCS Standard.

Data/Parameter:	$L_{m,g}$
Data unit:	Unit of quantity per vehicle – appropriate and varies based on cargo load transport items and mode of transport
Source of data:	The source is industry average loading for identified mode of transportation. This is in line with the VCS Standard Section 4.8.2.
Description of measurement methods and procedures to be applied:	The data will not be measured but will be sourced from transport operators or industry averages. This is appropriate based on the principles of the methodology and VCS.
Frequency of monitoring/recording:	The frequency is in line with the principles of VCS, as monitoring/recording will occur over five years or every reporting period.
QA/QC procedures to be applied:	The requirement for QA/QC is appropriate, as it ensures a qualified professional will oversee data collection, calculation, and other activities.
Purpose of data:	The purpose is appropriate, as it is a needed parameter in the calculation of project and estimation of baseline emissions.
Calculation method:	There is no actual calculation method, as the parameter will be established from records or industry standards.

Data/Parameter:	mh_s
Data unit:	Tonnes - the tonne is the standard measure for GHG accounting (Section 4.8.4 of VCS Standard).

Source of data:	The source is sampling of harvested trees of each species. This is in line with the VCS AFOLU requirements.
Description of measurement methods and procedures to be applied:	Measurement will be based on direct sampling to BC scaling standards. This will ensure accurate and appropriate measurement in line with the VCS AFOLU requirements.
Frequency of monitoring/recording:	The frequency of monitoring will ensure harvested tree measurements are captured at appropriate intervals.
QA/QC procedures to be applied:	The requirement for QA/QC is appropriate, as it ensures a qualified professional will oversee data collection, calculation, and other activities.
Purpose of data:	The purpose is appropriate, as it is a needed parameter in the calculation of project and estimation/modelling of baseline emissions.
Calculation method:	The calculation is an average of sampled trees, which is an appropriate and common practice sampling methodology.

Data/Parameter:	$M_{OFj,t}$
Data unit:	Tonnes of nitrogen-based organic fertilizer - the tonne is the standard measure for GHG accounting (Section 4.8.4 of VCS Standard).
Source of data:	The source of the data is fertilizer purchase and inventory records, which is appropriate because direct accounting of fertilizer will occur.
Description of measurement methods and procedures to be applied:	The description of measurement is standard accounting of inventory at beginning and ending of reporting period, which is appropriate, as direct accounting will occur.
Frequency of monitoring/recording:	The frequency of monitoring appropriately allows the fertilizer inventory and purchases to be accounted for during the reporting period.
QA/QC procedures to be applied:	The requirement for QA/QC is appropriate, as it ensures a qualified professional will oversee data collection, calculation, and other activities.
Purpose of data:	The purpose is appropriate, as it is a needed parameter in the calculation of project emissions or estimation/modelling of baseline emissions.
Calculation method:	The calculation method is standard accounting and is the most accurate method to account for fertilizer inventory and purchases.

Data/Parameter:	$M_{SFi,t}$
Data unit:	Tonnes of nitrogen-based synthetic fertilizer - the tonne is the standard measure for GHG accounting (Section 4.8.4 of VCS Standard).
Source of data:	The source of the data is fertilizer purchase and inventory records, which is appropriate because direct accounting of fertilizer will occur.
Description of measurement methods and procedures to be applied:	The description of measurement is standard accounting of inventory at beginning and ending of reporting period, which is appropriate, as direct accounting will occur.

Frequency of monitoring/recording:	The frequency of monitoring appropriately allows the fertilizer inventory and purchases to be accounted for during the reporting period.
QA/QC procedures to be applied:	The requirement for QA/QC is appropriate, as it ensures a qualified professional will oversee data collection, calculation, and other activities.
Purpose of data:	The purpose is appropriate, as it is a needed parameter in the calculation of project emissions or estimation/modelling of baseline emissions.
Calculation method:	The calculation method is standard accounting and is the most accurate method to account for fertilizer inventory and purchases.

Data/Parameter:	NC_{OFj}
Data unit:	% (Mass fraction) – the unit is a percentage and is appropriately required.
Source of data:	The source will be estimated data as specified by the manufacturer/supplier or determined by laboratory analysis. This will be the most reliable source of data.
Description of measurement methods and procedures to be applied:	Manufacturer specifications or lab analysis will determine the measurement amount.
Frequency of monitoring/recording:	Annual monitoring and recording will ensure all nitrogen content is accurately accounted for.
QA/QC procedures to be applied:	The requirement for QA/QC is appropriate, as it ensures a qualified professional will oversee data collection, calculation, and other activities.
Purpose of data:	The purpose is appropriate, as it is a needed parameter in the calculation of project emissions or estimation of baseline emissions.
Calculation method:	There is no actual calculation method, as the parameter will be established from manufacturer specifications and lab analysis.

Data/Parameter:	NC_{SFi}
Data unit:	% (Mass fraction) - the unit is a percentage and is appropriately required.
Source of data:	The source will be estimated data as specified by the manufacturer/supplier or determined by laboratory analysis. This will be the most reliable source of data.
Description of measurement methods and procedures to be applied:	Manufacturer specifications or lab analysis will determine the measurement amount.
Frequency of monitoring/recording:	Annual monitoring and recording will ensure all nitrogen content is accurately accounted for.
QA/QC procedures to be applied:	The requirement for QA/QC is appropriate, as it ensures a qualified professional will oversee data collection,

	calculation, and other activities.
Purpose of data:	The purpose is appropriate, as it is a needed parameter in the calculation of project emissions or estimation of baseline emissions.
Calculation method:	There is no actual calculation method, as the parameter will be established from manufacturer specifications and lab analysis.

Data/Parameter:	$Vol_{s,y,d}$
Data unit:	m^3 - the cubic meter allows conversion to the standard measure for GHG accounting (Section 4.8.4 of VCS Standard).
Source of data:	The source is actual field measurements derived from round wood delivery records and market breakdowns. This is in line with the VCS AFOLU Requirements.
Description of measurement methods and procedures to be applied:	No measurements will occur, but the data will be derived from delivery records and market breakdowns.
Frequency of monitoring/recording:	This will be continuously monitored as wood products meet their destination. This will ensure accurate accounting principles.
QA/QC procedures to be applied:	The requirement for QA/QC is appropriate, as it ensures a qualified professional will oversee data collection, calculation, and other activities.
Purpose of data:	The purpose is appropriate, as it is a needed parameter in the calculation of project emissions or estimation/modelling of baseline emissions.
Calculation method:	As the parameter will be established from manufacturer specifications and lab analysis, a simple summation of delivery records will be used.

4   ASSESSMENT CONCLUSION

ESI confirms that all second assessment activities for the *Protocol for the Creation of Forest Carbon Offsets in British Columbia (FCOP)* adhere to the criteria established for this assessment as documented in this report and is complete. ESI concludes without any qualifications or limiting conditions that the methodology documentation (*Protocol for the Creation of Forest Carbon Offsets in British Columbia (FCOP), Version 1*) meets the requirements of the VCS Program Guide (08 October 2013, v3.5), VCS Standard (25 March 2015, v3.5), VCS AFLOU Requirements (08 October 2013, v3.4), and the VCS Methodology Approval Process (04 October 2012, v3.4). Therefore, ESI recommends that VCSA approve the methodology element *Protocol for the Creation of Forest Carbon Offsets in British Columbia (FCOP)* as prepared by the Pacific Carbon Trust.

5   REPORT RECONCILIATION

As the second assessor this section is considered not applicable.

6   EVIDENCE OF FULFILMENT OF VVB ELIGIBILITY REQUIREMENTS

As set out in the VCS Methodology Approval Process:

1) Both validation/verification bodies shall be eligible under the VCS Program to perform validation for sectoral scope 14 (AFOLU); AND

2) At least one of the validation/verification bodies shall use an AFOLU expert in the assessment; AND

3) At least one of the validation/verification bodies shall have completed at least ten project validations in any sectoral scope. Project validations can be under the VCS Program or an approved GHG program, with the projects having been registered under the applicable program. A validation of a single project under more than one program (e.g., VCS and CDM) counts as one project validation. The validation/ verification body that meets this eligibility requirement may be the same validation/verification body that uses an AFOLU expert.

ESI fulfils the eligibility requirements in the following ways:

1) ESI is accredited by the American Standards Institute under ISO 14065:2007 for GHG Validation and Verification Bodied; including validation/verification of assertions related to GHG emission reductions and removals at the project level for Land Use and Forestry (Group 3). VCS accepts this accreditation.

2) ESI contracted Steve Ruddell for the methodology assessment, who is a VCS AFOLU expert. Additionally, ESI added Larry McCulloch, a Canadian Professional Forester. Both were full team members, who attended the meetings and completed the technical review.

3) To date, ESI has completed 26 VCS project validations under AFOLU. Please see Appendix C for the required evidence.

7   SIGNATURE

Signed for and on behalf of:

Name of entity: Environmental Services, Inc.
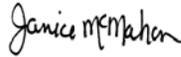
Janice McMahon

Signature: _____

Name of signatory: Janice McMahon
                         Sr. Vice President/Technical Director

Date: 06 May 2015

SMM/JPM/rmb/VO11067.00 Methodology2ndAssessment Report_Final_20150506
K: pf 05/06/15f

APPENDIX A – NCRS/CL/OFIS

Item No.	1
VCS Standard VCS Version 3 Requirements Document 25 March 2015, v3.5	4.1.1 The list of methodologies approved under the VCS Program, together with their respective validity periods, is available on the VCS website. All new methodologies applying for approval under the VCS Program shall use the VCS Methodology Template, comply with the requirements set out in this Section 4 and any other applicable requirements set out in the VCS rules, and be approved via the methodology approval process. AFOLU methodologies shall meet the rules and requirements set out in VCS document AFOLU Requirements. Ozone-depleting substances methodologies shall meet the rules and requirements set out in VCS document ODS Requirements.
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	General
ESI Findings - Round 1 (18 April 2012)	This is being reviewed simultaneously on another tab.
Round 1 NCR/CL/OFI (23 April 2012)	NCR: Please refer to "AFOLU_Version_3_2" tab for related NCRs.
Round 1 Response from Client (18 April 2012)	See AFOLU Version 3.2 tab
ESI Findings - Round 2 (23 April 2013)	Still pending AFOLU items
Round 2 NCR/CL/OFI (10 June 2013)	None
Round 2 Response from Client (23 August 2013)	None
ESI Findings - Round 3 (31 October 2013)	Still pending AFOLU items
Round 3 NCR/CL/OFI (01 November 2013)	NCR: Still pending additional AFOLU items.
Round 3 Response from Client (17 January 2014)	None
ESI Findings - Round 4 (14 February 2014)	The required VCS template is not being utilized, although the Methodology Developer has been allowed a verbal grace period via VCS.

Round 4 NCR/CL/OFI (18 February 2014)	OFI: As the VCS now requires the use of their templates, the Assessor again encourages formatting FCOP to the VCS template, although the VCS has given a verbal grace period for documents already drafted prior to the Rule change.
Round 4 Response from Client (05 May 2014)	We would prefer to finish validation without creating a bunch more opportunities for the FCOP Word document to do those strange things that Word documents can do when they get big and complex. We also note that the changes are mostly with regard to activity or performance methods, which we are not using
ESI Findings - Round 5 (20 May 2014)	Although this item was issued in Round 4 as an OFI (which are not required to be addressed), the verbal grace period ended in April 2014. The Round 4 submittal was submitted in May 2014 and, as such, the VCS Methodology Template should have been used.
Round 5 NCR/CL/OFI (23 May 2014)	NCR: Please use the VCS Methodology Template v3.3 (8 October 2013) and resubmit for validation. In addressing this NCR, please ensure consistency in all formatting and referencing, as well as appropriate grammar and spelling.
Round 5 Response from Client (22 July 2014)	Template updated.
ESI Findings - Round 6 (28 August 2014)	In general, the VCS Methodology Template v3.3 (8 October 2013) has been implemented. However,: -The template footer was not maintained -The definitions section includes terms already defined under the VCS -Some fields are missing from the Parameter Tables in Section 9.1. Specifically in the "comments" section of Table 1 there needs to be a statement of how the PCT methodology differs from each methodology. Additionally the statement that "none of the approved Methodologies or the methodologies under development allow for multiple forest and carbon management activities as part of a single project" is not true as VM0009 provides a means to quantify net GHG emission reductions and removals from project activities that prevent conversion of forest to non-forest and of native grassland and shrubland to a non-native state. Please revise/remove this statement. - There are two "Table 1" in the methodology. One on page 2 titled "Table 1: similar methodologies". Please correct. The "Data/Parameter field is blank in all parameter Tables in Section 9.2 and the required information is included in the "Data unit" field, which should include the unit of measure of the parameters. Missing or incomplete/incorrect fields must be included/corrected as per the template. Also, spelling errors, inconsistent formatting (paragraph indentation not matching headers - See Section 8), and grammatical errors (see Section 8 - additional periods, etc.) still exist.
Round 6 NCR/CL/OFI (17 September 2014)	CL: Please address the findings and update the methodology document accordingly.
Round 6 Response from Client (26 September 2014)	NONE

ESI Findings - Round 7 (19 October 2014)	Despite the lack of a response, 2014 09 22 VCS MED for BC FCOP.docx was reviewed. For the current version: - The VCS Methodology Template v3.3 (8 October 2013) footer has been maintained throughout the document. - The definitions section still includes terms already defined under the VCS; however, ESI understands that these must be included so that the definition is in compliance with the BC EOR. An email from the VCS dated 25 September 2014 indicates "Terms that are already defined within the VCS Program Definitions document but are defined in the methodology to provide further specifics or clarification are permitted" and "It is also permissible to include terms that are pertinent to the BC EOR to clarify them in context with the VCS requirements and definitions." The current version of FCOP makes an appropriate reference to the VCS Program Definitions document at the beginning of the definitions section and each overlapping term is now clarified regarding its origin and context within the VCS requirements and dentitions. None of the overlapping terms contradict their definition as presented within the VCS requirements and definitions documents. -The Parameter Tables in Section 9.1 have been updated accordingly and now contain all required fields. However, the Data/Parameter Cs & Cn should be Cr and Cn, the Value Applied for FracGASF, FracGASM, and FracLEACH-(S) are incorrect, the Source of Data for FracGASF and FracGASM is incorrect, and the Equations for Tx is incorrect. Please Revise. -The Relationship to Approved or Pending Methodologies section, including the similar methodologies table has been updated accordingly. -Table numbering had been updated and is sequentially correct - The Parameter Tables in Section 9.2 have been updated accordingly and now contain all required fields. -Spelling errors still exist in the document (see the occurrence of "de minimis" throughout the document), grammatical errors still exist (see page 25 - possessive form of proponents); paragraph indentation has been rectified, however, other formatting issues still exist (i.e. the style of Equation numbers was updated and right justification is not consistent throughout the document; there are spacing issues in the first paragraph of Section 3 and on Page 41; scientific names should be italicized or underlined; and a full blank page is included in the document (Page 75)).
Round 7 NCR/CL/OFI (19 October 2014)	CL: Please address the findings and update the Parameter Tables in Section 9.1 accordingly. Please also ensure the document is free of spelling, grammatical, and formatting issues, as identified in the findings.
Round 7 Response from Client (07 November 2014)	Parameter tables in sections 9.1 and 9.2 have been updated as per guidance from both methodology assessors. An extensive review of spacing, fonts, spellings, use of sub and superscripts, grammar and related items has been conducted by a third party.

ESI Findings - Round 8 (10 December 2014)	2014 10 16 VCS MED for BC FCOP.docx was reviewed and the Parameter Tables in Section 9.1 were confirmed to have been updated accordingly: - Cs & Cn was replaced with Cr and Cn -FRACgasf value applied was correctly updated to 0.1 - source of data correctly updated to Table 11.3 -FracGASM value applied was correctly updated to 0.2 - source of data correctly updated to Table 11.3 -FracLEACH - (H) value applied was correctly updated to 0.30 / 0 -the Equations for Tx has been correctly updated to Appendix A - all other updates to Sections 9.1 and 9.2 were confirmed to be appropriate with the following exception: -ms_s has been removed from Section 9.2 despite being used in Equation 33 Additionally, regarding spelling, grammar, and formatting: -de minimis has been corrected to de minimis throughout the document -Section 7.1.2 has been updated correctly to use the possessive form of "project proponent's" -Though the equation numbers are not to the right of the equations themselves throughout the document, the format chosen (to the right of the equation "title") is consistent and acceptable. -Significant spacing issues have been rectified -the blank page has been removed -scientific names are now underlined -Finally, a general spelling and grammar check was conducted and no notable issues were identified.
Round 8 NCR/CL/OFI (10 December 2014)	CL: Please justify the removal of the parameter "ms_s" (Average total mass of a standing tree of species s prior to harvest) from Section 9.2 of the methodology. Else, update the Parameter Tables in Section 9.2 to include this parameter.
Round 8 Response from Client (03 February 2015)	Response: In the original table in section 9.2, mss was correctly described as being "Calculated from mhs using appropriate BEF factors, or allometric equations for the species in question." Because this is therefore a value calculated from another monitored value, we believe that it does not belong in table 9.2. Happy to put it back in if there is another opinion, though.

ESI Findings - Round 9 (19 March 2015)	The response states that mss is derived from another monitored parameter (mh_s). This makes sense and it is a typical procedure for BEF or allometric equations to be used to quantify whole tree mass prior to removal based on the sampling of harvested trees (for mhs). However, currently mss is only mentioned on page 87 of the FCOP (in the Equation 33 parameters definition table and in the text below the table). The text below the Equation 33 parameter definitions table identifies how ms_s should be derived. It states "The preferred method for deriving mss is to run an appropriate TIPSY stand model, taking into account species, age and density, and divide the live biomass stock output by the modeled number of remaining live trees per hectare at the stand age." This statement does not appear to be in agreement with the stated response or the previously included parameter table for mss. Additionally, mhs is only modeled in the baseline case as per its Section 9.2 parameter table (measured for the project case). The mss parameter should be included in as a parameter in Section 9.2 so its derivation, source, methods of collection, etc. is clear. Otherwise, this information should be included below the Equation 33 parameters definition table. Additionally, the quoted text above should be revised for clarity as it appears to only be relevant to the baseline case. The methodology developer was notified of this on XX March 2015.
Round 9 Response from Client (23 March 2015)	After further review, I still do not believe that mss should be included in table 9.2, as in every case it will be a modelled or calculated variable, and not directly monitored. However, you are quite correct that the guidance given below Equation 33 was incomplete, and addressed only the baseline scenario. I have therefore added further guidance here to address the project scenario. Specifically, I have referred the user to the standard document for undertaking these conversions in British Columbia, "Volume to Biomass Conversion for British Columbia Forests", prepared by the BC Ministry of Forest and Range in 2011. I attach this document for your reference, as well as the revised version of the methodology I should also note that the available version of the "Volume to Biomass Conversion for British Columbia Forests" document continues to be marked "Draft". However, the methods and values identified in the document are those which are being applied to calculate stand biomass in BC's forest inventory, and are thus the most appropriate approach and values, providing a level of specificity at the genus and ecosystem level far exceeding any other available source.
ESI Findings - Round 9 (23 March 2015)	The additional language in the methodology referring the "Volume to Biomass Conversion for British Columbia Forests", prepared by the BC Ministry of Forest and Range in 2011 was reviewed and is sufficient to address the determination of MSS. It should be noted that this is a "draft" document, however the document is clearly in use by the Ministry and therefore is acceptable to reference for MSS. Finding closed.

Item No.	2
VCS Standard VCS Version 3 Requirements Document 25 March 2015, v3.5	4.1.2 Methodologies shall be informed by a comparative assessment of the project and its alternatives in order to identify the baseline scenario. Such an analysis shall include, at a minimum, a comparative assessment of the implementation barriers and net benefits faced by the project and its alternatives.
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Section 6.1.1
ESI Findings - Round 1 (18 April 2012)	FCOP allows for historic benchmark, performance standard, comparison-based, projection-based, pre-registered, other (if appropriate, and normalized (if appropriate) baseline approaches.
Round 1 NCR/CL/OFI (23 April 2012)	NCR: Although it appears the methodology allows for the minimum baseline approaches required by the VCS Standard 4.1.2, the assessor is concerned that the "Other" category is too broad for a methodology. Also, several instances in this section state "the protocol developer can..." This should read "project proponent can..." Please change all applicable instances of "Protocol Developer" or "Project Developer" to "Project Proponent." The methodology appears to allow for the PP to use a comparison-based baseline approach. The details on appropriately establishing a comparison-based approach are to be developed by the PP and validated by the VVB at project validation. The VCS Standard does not allow this to be determined at the validation stage. This should be defined in the methodology.
Round 1 Response from Client (18 April 2012)	The "Other" and "Comparison Based" baseline options have been removed from FCOP. Instances of "protocol developer" and "project developer" have been changed where relevant.
ESI Findings - Round 2 (23 April 2013)	In the new Section 6.1.1 (previously 6.1.2), the "Other" category has been removed. In addition, the "Comparison Based" approach has been removed. However, this does not seem optional. There are also several instances of "project developer" in Section 7.1.2, Steps 2b and 3b.
Round 2 NCR/CL/OFI (10 June 2013)	Although the "comparison based" approach was removed, the methodology "shall be informed by a comparative assessment of the project and its alternatives in order to identify the baseline scenario." Please demonstrate how the methodology achieves this. Please note the use of "project developer" in Section 7.1.2, Steps 2b and 3b.
Round 2 Response from Client (23 August 2013)	Section 7.1.2, steps 1, 2 and 3 constitute the "comparative assessment of the project and its alternatives in order to identify the baseline scenario" Project developer changed to project proponent

ESI Findings - Round 3 (31 October 2013)	The latest CDM "Combined Tool…" is referenced in Section 7.1. All references to Project Developer changed to Project Proponent. The CDM tool references an extra step that FCOP does not (Step 0). Otherwise, this section now contains a sound requirement for projects to demonstrate additionality and assess baseline in accordance with the CDM Combined Tool.
Round 3 NCR/CL/OFI (01 November 2013)	CL: The CDM Combined Tool has a Step 0 - Demonstrate the Project activity is the first of its kind. Please clarify why this has not been included in FCOP.
Round 3 Response from Client (17 January 2014)	In the CDM tool, step 0 allows the proponent to identify whether or not the project is "first of its kind". If so determined, the proponent is allowed to determine additionality directly in step 2 (b)(i). Consistent with BC FCOP, and most other standards, we have chosen to require a full determination of additionality whether or not the project is "first of its kind". As this choice is consistent with other tools such as VCS VT0001, we believe that it represents an acceptable, reasonable and conservative approach.
ESI Findings - Round 4 (14 February 2014)	The approach to require all projects to complete a comparative assessment of the project and its alternatives in order to identify the baseline scenario is conservative, as the minimum requirement by the VCS rule has been met (i.e., a comparative assessment of the implementation barriers and net benefits faced by the project and its alternatives). This item is addressed.

Item No.	3
VCS Standard VCS Version 3 Requirements Document 25 March 2015, v3.5	4.1.4 Methodology elements shall be guided by the principles set out in Section 2.4. They shall clearly state the assumptions, parameters and procedures that have significant uncertainty, and describe how such uncertainty shall be addressed. Where applicable, methodology elements shall provide a means to estimate a 90 or 95 percent confidence interval. Where a methodology applies a 90 percent confidence interval and the width of the confidence interval exceeds 20% of the estimated value or where a methodology applies a 95 percent confidence interval and the width of the confidence interval exceeds 30% of the estimated value, an appropriate confidence deduction shall be applied. Methods used for estimating uncertainty shall be based on recognized statistical approaches such as those described in the IPCC Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories. Confidence deductions shall be applied using conservative factors such as those specified in the CDM Meth Panel guidance on addressing uncertainty in its Thirty Second Meeting Report, Annex 14.
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Section 8.1.1.1.1, Field Sampling Method
ESI Findings - Round 1 (18 April 2012)	Field sampling for the project and baseline is described with a 90% confidence interval, using the lower bound of a 2-sided confidence interval for the project and the upper bound of a 2-sided interval for the baseline. Although this approach seems conservative, it is not in line with the VCS requirement of applying a confidence deduction if the width of the interval exceeds 20%.
Round 1 NCR/CL/OFI (23 April 2012)	NCR: Field sampling for the project and baseline is described with a 90% confidence interval, using the lower bound of a 2-sided confidence interval for the project and the upper bound of a 2-sided interval for the baseline. Although this approach seems conservative, it is not in line with the VCS requirement of applying a confidence deduction if the width of the interval exceeds 20%. Please revise to be consistent with the VCS requirements.
Round 1 Response from Client (18 April 2012)	Changes have been made to clarify that FCOP uses only project methods. Baseline options have been limited to historic and modeled types, to eliminate the confusion over performance baselines.
ESI Findings - Round 2 (23 April 2013)	Whether or not the FCOP allows project methods does not appear to impact the CL requirement.
Round 2 NCR/CL/OFI (10 June 2013)	Please include a requirement that satisfies the original NCR. The removal of the allowance of "comparison based" methods does not appear to satisfy the statistical confidence interval requirements mentioned in the original NCR and in the new Section 8.1.1.1.1.
Round 2 Response from Client (23 August 2013)	Changed to comply with VCS standard
ESI Findings - Round 3 (31 October 2013)	It still does not appear that FCOP is requiring a confidence deduction when certain statistical thresholds are met.

Round 3 NCR/CL/OFI (01 November 2013)	NCR: VCS Standard 4.1.4 states "Where a methodology applies a 90 percent confidence interval and the width of the confidence interval exceeds 20% of the estimated value or where a methodology applies a 95 percent confidence interval and the width of the confidence interval exceeds 30% of the estimated value, an appropriate confidence deduction shall be applied."
	It does not appear a confidence deduction is required anywhere in FCOP when certain statistical thresholds are not met.
Round 3 Response from Client (17 January 2014)	See section 8.1.1.1.1, Field Sampling Method, para 5, where this approach is explicitly specified. Note that for FCOP we specify 90% confidence intervals.
ESI Findings - Round 4 (14 February 2014)	Although, Section 8.1.1.1.1 describes the uncertainty analysis for field sampling, but it does not describe that a confidence deduction should be taken in line with VCS requirements.
Round 4 NCR/CL/OFI (18 February 2014)	NCR: Although an uncertainty calculation is described in Section 8.1.1.1.1, VCS requires a confidence deduction when statistical confidence is not met. This does not appear to be in line with the addition or subtraction from the mean that is being required in FCOP. Please address.
Round 4 Response from Client (05 May 2014)	VCS standard 4.1.4 relies on CDM MP 32 annex 14. The guidance given in that document is significantly less conservative than the guidance we have given. For instance, an uncertainty of 50% would only attract a confidence discount of 10.7%, versus a discount of 40% under our system (albeit we use a 90% confidence interval instead of 95%). Furthermore, please note that our method is identical to that used in VCS Module VMD0017 and other VCS modules to address this issue, again with the exception that they use +/-15% at 95% confidence, rather than +/-10% at 90% confidence. Our method is also identical in every regard with the method given in VCS module VMD0022. We have used the 90% confidence interval because it is more commonly used in many BC forest mensuration activities. Note also that we have chosen to be more conservative than required in the VCS Standard, by requiring an uncertainty discount when the uncertainty exceeds 10% at 90% confidence interval, rather than 20% as given in the Standard. In light of the fact that this is a common approach for addressing these issues within the VCS system, we believe that no alteration is required.
ESI Findings - Round 5 (20 May 2014)	Section 8.1.1.1 states "Where the width of the 90 percent confidence interval of the sampled data exceeds +/-10% of the estimated value, the amount that the calculated confidence interval is greater than +/- 10% must be added to the average (in the case of the baseline scenario), or subtracted from the average (in the case of the project scenario), and the resulting number used in quantification of carbon in the sampled carbon pool." Though not explicitly stated, this is in effect a confidence deduction. Considering that this requirement is for a confidence deduction when a 90% confidence interval exceeds 20% of the estimated value, the deduction is conservative. Deductions are often not applied to a baseline, and increasing the baseline due to uncertainty is conservative. Although the methods are not identical to VMD0017 and VMD0022 as stated in the response, uncertainty is being accounted for adequately. This Item can be closed.

Item No.	4
VCS Standard VCS Version 3 Requirements Document 25 March 2015, v3.5	4.1.6 Where methodologies mandate the use of specific models to simulate processes that generate GHG emissions (i.e., the project proponent is not permitted to use other models), the following applies, given the note below:
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Section 8.1.1.1.2
ESI Findings - Round 1 (18 April 2012)	None.
Round 1 NCR/CL/OFI (23 April 2012)	None.
Round 1 Response from Client (18 April 2012)	None.
ESI Findings - Round 2 (23 April 2013)	None.
Round 2 NCR/CL/OFI (10 June 2013)	None.
Round 2 Response from Client (23 August 2013)	None.
ESI Findings - Round 3 (31 October 2013)	Please note the new VCS requirement 4.1.6 as of 08 October 2013 (did not exist in the 04 October 2012 V3 updates). Models are mentioned throughout FCOP (54 references), but it is unclear if they are mandated.
Round 3 NCR/CL/OFI (01 November 2013)	CL: Please note the new VCS requirement 4.1.6 as of 08 October 2013 (did not exist in the 04 October 2012 V3 updates). Please clarify if any specific models are mandated in FCOP. If so, please ensure items 1-6 are being addressed and demonstrate to the assessor how they are being addressed.
Round 3 Response from Client (17 January 2014)	No specific models are mandated. See for instance comments after Table 7, Section 8.1.1.1.2, and the commentary in the last page and a half of section 8.1.1.1.2

ESI Findings - Round 4 (14 February 2014)	Text in Section 8.1.1.1.2 states "Regardless of whether a recommended model or alternative model is selected, project proponents must justify the selection by indicating how the selected model is the best choice for modeling the range of activities, conditions and other relevant site-specific details included in both the project and baseline scenario in comparison to other options available, and by considering the approaches and assumptions used in the various models." Further reading shows specific models are not required. This is now addressed.

Item No.	5
VCS Standard VCS Version 3 Requirements Document 25 March 2015, v3.5	4.1.7 Where methodologies use default factors and standards to ascertain GHG emission data and any supporting data for establishing baseline scenarios and demonstrating additionality, the following applies:
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Section 9.1.1
ESI Findings - Round 1 (18 April 2012)	None.
Round 1 NCR/CL/OFI (23 April 2012)	None.
Round 1 Response from Client (18 April 2012)	None.
ESI Findings - Round 2 (23 April 2013)	None.
Round 2 NCR/CL/OFI (10 June 2013)	None.
Round 2 Response from Client (23 August 2013)	None.
ESI Findings - Round 3 (31 October 2013)	Please note the new VCS requirement 4.1.7 as of 08 October 2013 (did not exist in the 04 October 2012 V3 updates). Defaults are mentioned throughout FCOP (137 references).
Round 3 NCR/CL/OFI (01 November 2013)	CL: Please note the new VCS requirement 4.1.7 as of 08 October 2013 (did not exist in the 04 October 2012 V3 updates). Please clarify how items 1-3 are being addressed.
Round 3 Response from Client (17 January 2014)	FCOP meets 4.1.7 1), 2)a), 2)b) and 3). Text has been added as section 9.1.1 to address 4.1.7 2)c).

ESI Findings - Round 4 (14 February 2014)	There are now 72 references to "default" in FCOP. The response to the CL did not *clearly* depict how 4.1.7 was being addressed. Please explain how, point-by-point, FCOP includes all the various VCS requirements for defaults.
Round 4 NCR/CL/OFI (18 February 2014)	CL: As FCOP itself states that several default factors are presented in the Methodology, please provide a separate document to the Assessor (not part of FCOP) that shows each default factor used in FCOP, in what section of FCOP it is located, where it was derived, how it was established, and how it meets the criteria in 4.1.7 and 4.5.6 mutatis mutandis.
Round 4 Response from Client (05 May 2014)	done
ESI Findings - Round 5 (20 May 2014)	Although Default factors and sources in FCOP.xlsx did not show how each factor meets the criteria in 4.1.7 and 4.5.6, the methodology assessor reviewed each factor for compliance. Several Items still need addressed. These are contained within a matrix for the methodology developer to complete. All items highlighted in red must be addressed.
Round 5 NCR/CL/OFI (23 May 2014)	CL: Please address each red highlighted item contained within Default factors and sources in FCOP_ValidationMatrix.xlsx
Round 5 Response from Client (22 July 2014)	See the identified workbook.
ESI Findings - Round 6 (28 August 2014)	Each red highlighted item contained within Default factors and sources in FCOP_ValidationMatrix.xlsx was reviewed by the methodology assessor. Several Items still need addressed. These are contained within an updated matrix for the methodology developer to complete. All items highlighted in red must be addressed.
Round 6 NCR/CL/OFI (17 September 2014)	CL: Please address each red highlighted item contained within Default factors and sources in FCOP_ValidationMatrix_Round6.xlsx
Round 6 Response from Client (26 September 2014)	See the accompanying workbook "Default factors and sources…"
ESI Findings - Round 7 (19 October 2014)	Each red highlighted item contained within Default factors and sources in FCOP_ValidationMatrix_Round6.xlsx was reviewed by the methodology assessor. A few Items still need addressed. These are contained within an updated matrix for the methodology developer to complete. All items highlighted in red must be addressed.
Round 7 NCR/CL/OFI (19 October 2014)	CL: Please address each red highlighted item contained within Default factors and sources in FCOP_ValidationMatrix_Round7.xlsx
Round 7 Response from Client (07 November 2014)	See the Default factors and sources workbook.

ESI Findings - Round 8 (10 December 2014)	Each red highlighted item contained within Default factors and sources in FCOP_ValidationMatrix_Round7.xlsx was reviewed by the methodology assessor. A few Items still need addressed. These are contained within an updated matrix for the methodology developer to complete. All items highlighted in red must be addressed.
Round 8 NCR/CL/OFI (10 December 2014)	CL: Please address each red highlighted item contained within Default factors and sources in FCOP_ValidationMatrix_Round8.xlsx
Round 8 Response from Client (03 February 2015)	No response provided
ESI Findings - Round 9 (19 March 2015)	Each red highlighted item contained within Default factors and sources in FCOP_ValidationMatrix_Round8.xlsx was reviewed by the methodology assessor. All Items have been addressed. This Item can be closed.

Item No.	6
VCS Standard VCS Version 3 Requirements Document 25 March 2015, v3.5	1) Where the methodology uses third party default factors and/or standards, such default factors and standards shall meet with the requirements for data set out in Section 4.5.6, mutatis mutandis. 2) Where the methodology itself establishes a default factor, the following applies: a) The data used to establish the default factor shall comply with the requirements for data set out in Section 4.5.6, mutatis mutandis. b) The methodology shall describe in detail the study or other method used to establish the default factor. c) The methodology developer shall identify default factors which may become out of date (i.e., those default factors that do not represent physical constants or otherwise would not be expected to change significantly over time). Such default factors are subject to periodic re-assessment, as set out in VCS document Methodology Approval Process. 3) Where methodologies allow project proponents to establish a project-specific factor, the methodology shall provide a procedure for establishing such factors.
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	All
ESI Findings - Round 1 (18 April 2012)	None.
Round 1 NCR/CL/OFI (23 April 2012)	None.
Round 1 Response from Client (18 April 2012)	None.
ESI Findings - Round 2 (23 April 2013)	None.
Round 2 NCR/CL/OFI	None.

(10 June 2013)	
Round 2 Response from Client (23 August 2013)	None.
ESI Findings - Round 3 (31 October 2013)	1) is specific to performance methods but would also apply to all here.
Round 3 NCR/CL/OFI (01 November 2013)	CL: Please note that although this requirement references 4.5.6, which applies to Performance Standards, because FCOP uses defaults, 4.5.6 is now relevant and must be adhered to. Please confirm FCOP is adhering to the requirements set out in 4.5.6.
Round 3 Response from Client (17 January 2014)	FCOP does adhere to the requirements set out in 4.5.6. Data used for derivation of default factors and other data provided is derived from peer reviewed or government sources, is the most current available, and is publicly available, is appropriate to the geographic and sectoral scope of the methodology. FCOP does not use data collected directly from primary sources, and therefore sampling and data repository issues do not apply.
ESI Findings - Round 4 (14 February 2014)	FCOP now contains Section 9.1.1, detailing three default factors subject to periodic re-assessment as information becomes available. The default factors are not described in Section 9.1.1 (or throughout the Methodology) in a way that shows how Section 4.1.7 and 4.5.6 of the VCS Standard are being adhered to.
Round 4 NCR/CL/OFI (18 February 2014)	CL: As FCOP itself states that several default factors are presented in the Methodology, please provide a separate document to the Assessor (not part of FCOP) that shows each default factor used in FCOP, in what section of FCOP it is located, where it was derived, how it was established, and how it meets the criteria in 4.1.7 and 4.5.6 mutatis mutandis.

Item No.	7
VCS Standard VCS Version 3 Requirements Document 25 March 2015, v3.5	4.1.8 Where proxies are used, it shall be demonstrated that they are strongly correlated with the value of interest and that they can serve as an equivalent or better method (e.g., in terms of reliability, consistency or practicality) to determine the value of interest than direct measurement of the value itself.
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	n/a
ESI Findings - Round 1 (18 April 2012)	None.
Round 1 NCR/CL/OFI (23 April 2012)	None.
Round 1 Response from Client (18 April 2012)	None.
ESI Findings - Round 2 (23 April 2013)	None.

Round 2 NCR/CL/OFI (10 June 2013)	None.
Round 2 Response from Client (23 August 2013)	None.
ESI Findings - Round 3 (31 October 2013)	It does not appear proxies are being allowed, but this is unclear.
Round 3 NCR/CL/OFI (01 November 2013)	CL: Please note the new requirement 4.1.8 and clarify if proxies are being allowed.
Round 3 Response from Client (17 January 2014)	Proxies are not being used in FCOP. All measurement is of the values directly.
ESI Findings - Round 4 (14 February 2014)	The Assessor confirmed that proxies do not appear to be utilized or required in FCOP. This item can be addressed.

Item No.	8
VCS Standard VCS Version 3 Requirements Document 25 March 2015, v3.5	4.1.9 Methodologies shall use a standardized method (i.e., performance method or activity method) or a project method to determine additionality and/or the crediting baseline, and shall state which type of method is used for each. A project method is a methodological approach that uses a project-specific approach for the determination of additionality and/or crediting baseline. Standardized methods are further described in Section 4.1.11 and additional guidance is available in VCS document Guidance for Standardized Methods. This guidance document provides additional information to aid the interpretation of the VCS rules on standardized methods and should be read before developing or assessing such methods. Although the guidance document does not form part of the VCS rules, interpretation of the rules shall be consistent with the guidance document.
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Section 6.0; Section 7.1
ESI Findings - Round 1 (18 April 2012)	For additionality, FCOP states "The particular approach used will depend on project-specific circumstances, and may include approaches not listed below."
Round 1 NCR/CL/OFI (23 April 2012)	CL: Please state in FCOP if the baseline will be determined with a standardized or project method, as required in 4.1.6 of the VCS Standard.
Round 1 Response from Client (18 April 2012)	As discussed above, clarity has been added that no standardized methods are used in FCOP.
ESI Findings - Round 2 (23 April 2013)	The methodology now states "Within this protocol, baselines are determined on a project specific basis, such that each project proponent must prepare and justify their own baseline estimates, following the guidance given in the protocol" under Section 6.0.

Round 2 NCR/CL/OFI (10 June 2013)	Although discussed above, the requirement is that it be clearly stated in the methodology. The methodology assessor noted the addition of a sentence that explains this in Section 6.0 for the baseline but did not see a similar sentence for additionality. Please clarify where the methodology states what type of method is allowed for the additionality determinations.
Round 2 Response from Client (23 August 2013)	Added to section 7.1
ESI Findings - Round 3 (31 October 2013)	The following statement clearly indicates a project method is used: "Project baseline and additionality shall be determined using a Project Method, following the procedures detailed in this section, and following the guidance given in section 7.2." Addressed.

Item No.	9
VCS Standard VCS Version 3 Requirements Document 25 March 2015, v3.5	4.1.10 Methodologies may use any combination of project, performance or activity methods for determining additionality and the crediting baseline. However, methodologies shall provide only one method (i.e., a project method or performance method) for determining the crediting baseline (i.e., methodologies shall not provide the option of using either a project method or a performance method for the crediting baseline).
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Section 6.1.1
ESI Findings - Round 1 (18 April 2012)	The assessor interprets this requirement to mean that you can have a standardized baseline and project additionality approach, but you cannot have either/or for the baseline.

In section 6.1.1 of the meth, table 7 under performance standard, the Methodology states that the only project activity for which a performance method is approved is REDD, the others are deemed not appropriate. This is unclear. |
| Round 1 NCR/CL/OFI (23 April 2012) | NCR: It appears that several approaches are allowed for a REDD project to determine its baseline scenario (performance or project method), which appears to conflict with VCS Standard requirement 4.1.7, as only one over-arching type of baseline approach is allowed. Per the NCR above, FCOP should state which <u>singular</u> approach is allowed in the methodology for determining the crediting baseline for each project activity. Also, please specifically state in FCOP what category the allowed baseline approaches fall into (project or performance) for each project activity.**

**Please note that methodology is attempting to use a standardized method for the REDD component. One of the two VVBs will need to have a standardized methods expert (similar to an AFOLU expert). |
Round 1 Response from Client (18 April 2012)	All baseline methods used in FCOP are project methods. This has been clarified.
ESI Findings - Round 2 (23 April 2013)	The methodology now states "Within this protocol, baselines are determined on a project specific basis, such that each project proponent must prepare and justify their own baseline estimates, following the guidance given in the protocol" under Section 6.0.
Round 2 NCR/CL/OFI (10 June 2013)	Pending #4 above.

Round 2 Response from Client (23 August 2013)	As above
ESI Findings - Round 3 (31 October 2013)	The following statement clearly indicates a project method is used: "Project baseline and additionality shall be determined using a Project Method, following the procedures detailed in this section, and following the guidance given in section 7.2." Addressed.

Item No.	10
VCS Standard VCS Version 3 Requirements Document 25 March 2015, v3.5	4.1.12 Methodologies shall include sufficient information and evidence to allow the reader to reach the same assessment conclusion on the appropriateness and rigor of the standardized method reached by the two validation/verification bodies in the methodology approval process, noting that the confidentiality of proprietary data may be protected as set out in Section 4.5.6(5). To aid the readability and clarity of methodologies, such information and evidence may be included in appendices to methodology documents rather than in the body of the documents themselves. Following their initial approval, methodologies are subject to periodic re-assessment, as set out in VCS document Methodology Approval Process.
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	General
ESI Findings - Round 1 (18 April 2012)	The methodology is very large, superfluous, and appears to have non-relevant information in its body.
Round 1 NCR/CL/OFI (23 April 2012)	OFI: As per the language in 4.1.9 of the standard, please consider paring down the 176-page methodology to include more of the information currently in the body of the methodology instead in the appendices or supporting documents to aid in readability/clarity.
Round 1 Response from Client (18 April 2012)	Significant background sections have been removed. See also General Technical Comments item #151
ESI Findings - Round 2 (23 April 2013)	It appears the methodology has been reduced to 142 pages. As this was an OFI, it can be considered addressed.

Item No.	11
VCS Standard VCS Version 3 Requirements Document 25 March 2015, v3.5	4.1.13 All new performance methods shall be prepared using the VCS Methodology Template. A performance method is an integral part of a methodology and therefore it cannot be developed and approved as a separate module that is then applied by projects in conjunction with other methodologies.
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Section 6.1
ESI Findings - Round 1 (18 April 2012)	FCOP has used the VCS methodology template and allows for performance standard baseline approach and a project-specific additionality approach. Some of the Sections are not numbered the same as VCS numbering.

Round 1 NCR/CL/OFI (23 April 2012)	NCR: Per the VCS Standard requirement 4.1.10, the VCS Methodology Template has been used by FCOP; however, some of the headers and numbering do not match. Please ensure Section 8 "Quantification of GHG Emission Reductions and Removals," Section 8.1 "Baseline Emissions," Section 8.2 "Project Emissions," and Section 9.3 "Description of the Monitoring Plan." Please include a Section 9.1 "Data and Parameters Available at Validation," Section 9.2 "Data and Parameters Monitored," and Section 11 "References and Other Information," as they did not appear to be included in the required context.
Round 1 Response from Client (18 April 2012)	Changes have been made to conform with the VCS methodology template… except note that References is section 10, not 11, as mentioned in the NCR.
ESI Findings - Round 2 (23 April 2013)	The required template and headings are now used. Addressed.

Item No.	12
VCS Standard VCS Version 3 Requirements Document 25 March 2015, v3.5	4.3.1 The methodology shall use applicability conditions to specify the project activities to which it applies and shall establish criteria that describe the conditions under which the methodology can (and cannot, if appropriate) be applied. Any applicability conditions set out in tools or modules used by the methodology shall also apply.
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Section 4.1
ESI Findings - Round 1 (18 April 2012)	There is uncertainty in the applicability conditions versus the eligibility conditions. This needs clarification.
Round 1 NCR/CL/OFI (23 April 2012)	NCR: Section 4.0 Applicability Conditions of the Methodology defines "eligibility criteria by project type". As required by Section 4.3.1 of the VCS Standard, (and related Section 4.3.7) applicability conditions shall specify the project activity to which it applies and describe the conditions under which the methodology can be applied. Please note that eligibility conditions are not the same as applicability conditions. Additionally, legal requirements are not applicability conditions. Applicability conditions must not conflict with Table 1 Relevant GHGs or the VCS Program Definitions. Please address.
Round 1 Response from Client (18 April 2012)	Applicability conditions have been redrafted. The statement on legal requirements has been retained, however.
ESI Findings - Round 2 (23 April 2013)	The methodology has been redrafted to conform to the standard applicability format, as requested. Addressed.

Item No.	13
VCS Standard VCS Version 3 Requirements Document 25 March 2015, v3.5	4.3.2 Precise specification of the project activity is required to provide a carefully targeted standardized method with an appropriate level of aggregation with respect to the project activity. The applicability conditions shall be specified accordingly and shall cause to be excluded from the methodology, to the extent practicable, those classes of project activities that it can be reasonably assumed will be implemented without the intervention created by the carbon market. For example, the methodology may exclude facilities larger than a specific size or capacity, constructed before a given date or that have regular access to lower cost fuels than most facilities. The methodology shall demonstrate how the applicability conditions achieve such objective with respect to free-riders.
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Section 4
ESI Findings - Round 1 (18 April 2012)	It appears that allowing for several project activity types, FCOP allows the possibility of including activities that would have been implemented without the intervention created by the carbon market.
Round 1 NCR/CL/OFI (23 April 2012)	NCR: Please provide a discussion /support for the case that afforestation and separately reforestation on Crown Lands is additional so long as it is not required by law.
Round 1 Response from Client (18 April 2012)	baseline and additionality sections updated based on CDM tool
ESI Findings - Round 2 (23 April 2013)	The methodology has been updated to exclude standardized methods. Addressed.

Item No.	14
VCS Standard VCS Version 3 Requirements Document 25 March 2015, v3.5	4.3.6 The applicability of the methodology or a performance benchmark shall be limited to the geographic area for which data are available, or it shall be demonstrated that data from one geographic area are representative of another or that it is conservative to apply data from one geographic area to another. Representativeness shall be determined in terms of the similarity of the geographic areas considering such factors as those set out in Section 4.3.5 above. Likewise, it shall be determined that it is conservative to apply data from one geographic area by considering the same factors. In determining whether two areas are sufficiently similar, or that it is conservative, to allow data to apply from one area to another, only factors related to the baseline scenario and additionality need to be considered.
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	n/a
ESI Findings - Round 1 (18 April 2012)	The methodology's conformance to this requirement is unclear.

Round 1 NCR/CL/OFI (23 April 2012)	CL: Please clarify if all data required for a future project under FCOP is available in all areas of BC. If not, please clarify if it will be conservative to use the available data for all projects under FCOP.
Round 1 Response from Client (18 April 2012)	Not applicable as we are not using a performance method, as defined by the VCS.
ESI Findings - Round 2 (23 April 2013)	This criterion applies solely to performance methods, which FCOP is not.

Item No.	15
VCS Standard VCS Version 3 Requirements Document 25 March 2015, v3.5	4.3.9 The applicability conditions shall establish the scope of validity of the methodology, including the geographic scope. In establishing the scope of validity of the methodology, the methodology shall clearly demonstrate that there is similarity across the sub-areas of the geographic scope in factors such as socio-economic conditions, climatic conditions, energy prices, raw material availability and electricity grid emission factors, as such factors relate to the baseline scenario and additionality, It may be necessary to limit the applicability of the methodology to comply with this requirement.
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Section 4.1, Page 14
ESI Findings - Round 1 (18 April 2012)	The geographic scope is BC, but the similarity across the region is not demonstrated. See above item #22.
Round 1 NCR/CL/OFI (23 April 2012)	NCR: As required by Section 4.3.9 of the VCS Standard, applicability conditions shall establish the scope of validity of the methodology, including the geographic scope. If applicable, please demonstrate similarity across any existing sub-areas.
Round 1 Response from Client (18 April 2012)	Not applicable as we are not using an activity method, as defined by the VCS… but see 18 and 20 above.
ESI Findings - Round 2 (23 April 2013)	This only applies to Activity Methods, which they are not using. Addressed.

Item No.	16
VCS Standard VCS Version 3 Requirements Document 25 March 2015, v3.5	4.4.1 The methodology shall establish criteria and procedures for describing the project boundary and identifying and assessing GHG sources, sinks and reservoirs relevant to the project and baseline scenarios. Justification for GHG sources, sinks and reservoirs included or excluded shall be provided.

Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Section 5; 5.2.2
ESI Findings - Round 1 (18 April 2012)	It appears section 5.2 is inconsistent with the requirements of the VCS AFOLU requirements Section 4.4. Additionally, SSPs should be restated as SSRs to be in conformance with VCS terminology.
Round 1 NCR/CL/OFI (23 April 2012)	NCR: It appears section 5.2 is inconsistent with the requirements of the VCS AFOLU requirements Section 4.4. Please address. Additionally, SSPs should be restated as SSRs to be in conformance with VCS terminology.
Round 1 Response from Client (18 April 2012)	Table added to clarify project boundary issues.
ESI Findings - Round 2 (23 April 2013)	The tables have been formatted to meet AFOLU requirements.
Round 2 NCR/CL/OFI (10 June 2013)	SSR's are still listed as SSP's. Please address the original requirement requesting VCS terminology be used.
Round 2 Response from Client (23 August 2013)	Actually, VCS uses the terms pool and reservoir interchangeably, and in the AFOLU guidelines never uses the word "reservoir" in this context - the word is always "pool" - see for example AFOLU Guidelines 3.1.11, 4.2.12, 4.3.1… In the interest of consistency, we have used SSP's.
ESI Findings - Round 3 (31 October 2013)	The Methodology Developer's statement that the VCS themselves do not use consistent language has merit. There are some instances where certain terms are italicized in one location, but not the next.
Round 3 NCR/CL/OFI (01 November 2013)	OFI: Please italicize *de minimis, ex ante, ex post,* etc., throughout document for consistency.
Round 3 Response from Client (17 January 2014)	All defined terms were checked, and all instances italicized, except where used in titles
ESI Findings - Round 4 (14 February 2014)	Since this was an OFI, it is not required to be addressed, but just a suggested edit. Therefore, this item can be officially closed.

Item No.	17
VCS Standard VCS Version 3 Requirements Document 25 March 2015, v3.5	4.4.3 In identifying GHG sources, sinks and reservoirs relevant to the baseline scenario, the methodology shall: 1) Set out criteria and procedures used for identifying the GHG sources, sinks and reservoirs relevant for the project.

Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Section 5
ESI Findings - Round 1 (18 April 2012)	Table 8 mentions not requiring monitoring of PE4/BE4, PE6/BE6, PE7/BE7, PE8/BE8, PE10/BE10, and PE11/BE11, as it is not common practice to do so. That is not an acceptable statement, as the intent of a forest project is to be above common practice.
Round 1 NCR/CL/OFI (23 April 2012)	NCR: Although it appears to be located in several parts of FCOP, it is unclear how a singular forest project (for example, reforestation), will use Section 5 of FCOP to determine what sources, sinks and reservoirs should be accounted for. Please consider revising this section to be more succinct specific to the needs of a project proponent/developer.
Round 1 Response from Client (18 April 2012)	Table added to clarify project boundary issues.
ESI Findings - Round 2 (23 April 2013)	They have made many improvements, and the added Tables 5 and 6 depict the requirement. Addressed.

Item No.	18
VCS Standard VCS Version 3 Requirements Document 25 March 2015, v3.5	4.5.7 The dataset may be documented and contained within the methodology, or may be maintained in a separate repository that is referenced by the methodology. Datasets documented and contained within methodologies are static datasets, where all projects use the level of the performance benchmark metric specified in the methodology (noting that autonomous improvement factors may be used, as set out in Section 4.5.5 above). The following applies with respect to datasets maintained in a separate repository:
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Section 6.1.2
ESI Findings - Round 1 (18 April 2012)	It is unclear if performance methods are documented or maintained in FCOP.
Round 1 NCR/CL/OFI (23 April 2012)	CL: Please clarify if datasets for performance methods will be documented and contained in FCOP or will be maintained in a separate repository. If in a separate repository, please ensure items 1-4 are adhered to.
Round 1 Response from Client (18 April 2012)	Applies to Performance methods, which are not used in FCOP
ESI Findings - Round 2 (23 April 2013)	No longer allowing performance methods. Addressed.

Item No.	19
VCS Standard VCS Version 3 Requirements Document 25 March 2015, v3.5	4.6.1 The methodology shall establish a procedure for the demonstration and assessment of additionality based upon the requirements set out below. Note that such requirements are for methodology development, and projects shall demonstrate and assess additionality in accordance with the requirements set out in the applied methodology.
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Section 7.1
ESI Findings - Round 1 (18 April 2012)	For additionality, FCOP states "The particular approach used will depend on project-specific circumstances, and may include approaches not listed below."
Round 1 NCR/CL/OFI (23 April 2012)	NCR: It does not appear that FCOP is requiring the use of an appropriate additionality tool that has been approved under the VCS or an approved GHG program. If so, please state this as a requirement (not recommendation or option) in the methodology.
Round 1 Response from Client (18 April 2012)	FCOP now uses the standard VCS additionality tool
ESI Findings - Round 2 (23 April 2013)	Section 7.1.2 now details a step-wise additionality approach.

Item No.	20
VCS Standard VCS Version 3 Requirements Document 25 March 2015, v3.5	4.6.2 Methodologies shall use a project method, performance method and/or activity method to determine additionality. The high level specifications and procedural steps for each approach are set out in Sections 4.6.3 to 4.6.9 below. New methodologies developed under the VCS shall meet this requirement by doing one of the following:
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Section 7.1
ESI Findings - Round 1 (18 April 2012)	For additionality, FCOP states "The particular approach used will depend on project-specific circumstances, and may include approaches not listed below."
Round 1 NCR/CL/OFI (23 April 2012)	NCR: It does not appear that FCOP is requiring the use of an appropriate additionality tool that has been approved under the VCS or an approved GHG program. If so, please state this as a requirement (not recommendation or option) in the methodology.
Round 1 Response from Client (18 April 2012)	FCOP now uses the standard VCS additionality tool

ESI Findings - Round 2 (23 April 2013)	It is a project test, since it will be determined on a project specific basis. Addressed.

Item No.	21
VCS Standard VCS Version 3 Requirements Document 25 March 2015, v3.5	1) Referencing and requiring the use of an appropriate additionality tool that has been approved under the VCS or an approved GHG program;
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Section 7.1
ESI Findings - Round 1 (18 April 2012)	No tool was mentioned.
Round 1 NCR/CL/OFI (23 April 2012)	NCR: It does not appear that FCOP is requiring the use of an appropriate additionality tool that has been approved under the VCS or an approved GHG program. If so, please state this as a requirement (not recommendation or option) in the methodology.
Round 1 Response from Client (18 April 2012)	FCOP now uses the standard VCS additionality tool
ESI Findings - Round 2 (23 April 2013)	The VCS tool is not referenced, so it appears like the Methodology Developer they came up with their own tool for additionality, even though they state that is not the case based on the response to the NCR.
Round 2 NCR/CL/OFI (10 June 2013)	If using the standard VCS tool for additionality, please reference in the methodology under Section 7.1, as it is unclear.
Round 2 Response from Client (23 August 2013)	Apologies - This should have stated that FCOP now uses an adaptation of the tool, which is given in section 7.1
ESI Findings - Round 3 (31 October 2013)	FCOP Section 7.1 now includes the following statement for additionality and baseline assessment: "The methods given in this section are based on the Clean Development Mechanism Tool02: Combined tool to identify the baseline scenario and demonstrate additionality, V05.0.0." Addressed.

Item No.	22
VCS Standard VCS Version 3 Requirements Document 25 March 2015, v3.5	2) Developing a full and detailed procedure for demonstrating and assessing additionality directly within the methodology; or

Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Section 7.1
ESI Findings - Round 1 (18 April 2012)	The assessor does not feel the additionality requirements of FCOP are "full and detailed" until the appropriate tool has been used.
Round 1 NCR/CL/OFI (23 April 2012)	NCR: Please expand in this section or simply require the use of the VCS "Tool for Demonstration and Assessment of Additionality in AFOLU Project Activities".
Round 1 Response from Client (18 April 2012)	FCOP now uses the standard VCS additionality tool
ESI Findings - Round 2 (23 April 2013)	It does not appear this is relevant, as they are diverting to VCS tool as stated above, but it is pending the above response.
Round 2 NCR/CL/OFI (10 June 2013)	Pending # 53 above.
Round 2 Response from Client (23 August 2013)	Apologies - This should have stated that FCOP now uses an adaptation of the tool, which is given in section 7.1
ESI Findings - Round 3 (31 October 2013)	FCOP Section 7.1 now includes the following statement for additionality and baseline assessment: "The methods given in this section are based on the Clean Development Mechanism Tool02: Combined tool to identify the baseline scenario and demonstrate additionality, V05.0.0." Addressed.

Item No.	23
VCS Standard VCS Version 3 Requirements Document 25 March 2015, v3.5	The project shall not be mandated by any law, statute or other regulatory framework, or for UNFCCC non-Annex I countries, any systematically enforced law, statute or other regulatory framework. For UNFCCC non-Annex I countries, laws, statutes, regulatory frameworks or policies implemented2 since 11 November 2001 that give comparative advantage to less emissions-intensive technologies or activities relative to more emissions-intensive technologies or activities need not be taken into account. For all countries, laws, statutes, regulatory frameworks or policies implemented since 11 December 1997 that give comparative advantage to more emissions-intensive technologies or activities relative to less emissions-intensive technologies or activities shall not be taken into account.
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Section 4.1
ESI Findings - Round 1 (18 April 2012)	This requirement was not observed in the applicability section.
Round 1 NCR/CL/OFI (23 April 2012)	NCR: Although several relevant laws were mentioned in FCOP, the assessor did not locate a requirement (perhaps in the applicability criteria) that "the project shall not be mandated by any law, statute or other regulatory framework." Please include this requirement in the methodology.

Round 1 Response from Client (18 April 2012)	Now given as an applicability condition.
ESI Findings - Round 2 (23 April 2013)	Section 4.1 # 3 states that "3. Project activities must not be mandated by any law, statute, or other regulatory framework." Addressed.

Item No.	24
VCS Standard VCS Version 3 Requirements Document 25 March 2015, v3.5	The project shall face one or more distinct barrier(s) compared with barriers faced by alternatives to the project:
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Section 6.1.4
ESI Findings - Round 1 (18 April 2012)	Barriers listed for project types that are supposed to demonstrate additionality, but not for afforestation and reforestation, so tbd pending other NCRs. The comparison based approach for IFM does not require the mentioned barriers.
Round 1 NCR/CL/OFI (23 April 2012)	NCR: It appears that an IFM project can opt for a comparison-based approach, which does not require the implementation barriers described in Step 2 (4.6.4). Please include the requirement for the required implementation barriers in the comparison-based approach, or describe how it meets the requirements of 4.6.4.
Round 1 Response from Client (18 April 2012)	FCOP now uses the standard tool, and the redraft does not include a comparison based approach for IFM
ESI Findings - Round 2 (23 April 2013)	Section 7.1.2 now details a step-wise additionality approach, including a full barrier analysis for Step 2. Addressed.

Item No.	25
VCS Standard VCS Version 3 Requirements Document 25 March 2015, v3.5	4.8.1 The methodology shall describe the data and parameters to be reported, including sources of data and units of measurement.
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Section 9
ESI Findings - Round 1 (18 April 2012)	Table 19 describes the Data and Parameters to be monitored, including units of measurement; the assessment team did note sources of data.

Round 1 NCR/CL/OFI (23 April 2012)	NCR: Please include sources of data in Table 19.
Round 1 Response from Client (18 April 2012)	Table 19 revised to conform with standard VCS format in sections 9.1 and 9.2
ESI Findings - Round 2 (23 April 2013)	The revised Tables in Section 9.0 and 9.2 conform to the VCS table requirements and contain "sources."

Item No.	26
VCS Standard VCS Version 3 Requirements Document 25 March 2015, v3.5	4.8.3 When highly uncertain data and information are relied upon, conservative values shall be selected that ensure that the quantification does not lead to an overestimation of net GHG emission reductions or removals.
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Section 9.3
ESI Findings - Round 1 (18 April 2012)	It does not appear there is a requirement in FCOP that projects use conservative values when highly uncertain data and information are relied upon.
Round 1 NCR/CL/OFI (23 April 2012)	NCR: Please include a requirement in FCOP that projects use conservative values when highly uncertain data and information are relied upon.
Round 1 Response from Client (18 April 2012)	Added to section 9.3
ESI Findings - Round 2 (23 April 2013)	Section 9.3 of methodology now states "When standards or factors have a high degree of uncertainty, conservative values shall be selected to ensure that quantification does not lead to an over-estimation of GHG emission reductions or removals. The Monitoring Plan must detail how the following will be monitored:" Addressed.

Item No.	27
VCS AFOLU Requirements Version 3.4 (08 October 2013)	4.1.2 As set out in the VCS Standard, default factors and standards used to ascertain GHG emission data and any supporting data for establishing baseline scenarios and demonstrating additionality shall be publicly available from a recognized, credible source, such as IPCC 2006 Guidelines for National GHG Inventories or the IPCC 2003 Good Practice Guidelines for Land Use, Land-Use Change and Forestry. See the VCS Standard for the full rules and requirements for the use of default factors and standards.
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Section 8

ESI Findings - Round 1 (18 April 2012)	FCOP indicates that a range of good practice guidance was consulted, including both general greenhouse gas (GHG) quantification guidance and guidance specific to forestry projects including, amongst others: ISO 14064-2, the WRI / WBCSD GHG Protocol for Project Accounting, the IPCC 2006 Guidelines for National Greenhouse Gas Inventories, the VCS Tools for AFOLU Methodological Issues and for AFOLU Non-Permanence Risk Analysis and Buffer Determination, the CAR Forest Project Protocol, and the American Carbon Registry / Finite Carbon, Improved Forest Management Methodology. It is unclear if the IPCC 2003 Good Practice Guidelines for Land Use, Land-Use Change and Forestry were considered. VCS noted that it requires the use of IPCC Second Assessment Report GWP factors.
Round 1 NCR/CL/OFI (23 April 2012)	NCR: It is unclear if the IPCC 2003 Good Practice Guidelines for Land Use, Land-Use Change and Forestry were considered. Additionally, VCS requires the use of IPCC Second Assessment Report GWP factors. If these were consulted, please note this in the methodology.
Round 1 Response from Client (18 April 2012)	Dealt with under items # 83 - 87
ESI Findings - Round 2 (23 April 2013)	This item is addressed, as the IPCC Guidelines are referenced in Section 1.1, and the IPCC Second Assessment is referenced in Section 8.0 of the methodology.

Item No.	28
VCS AFOLU Requirements Version 3.4 (08 October 2013)	4.1.3 Where a methodology combines AFOLU project categories, the methodology shall adhere to all sets of requirements pertaining to each and every project category covered, either separating activities, or where activities cannot be separated, taking a conservative approach to each requirement.
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Section 5, 6, 7, and 8
ESI Findings - Round 1 (18 April 2012)	The methodology does not address project activities and relevant carbon pools for Sections 4.3, 4.4, 4.5, 4.6 4.7, and 4.8 of the AFOLU Requirements: VCS Version 3
Round 1 NCR/CL/OFI (23 April 2012)	NCR: Please address project activities and relevant carbon pools for Sections 4.3, 4.4, 4.5, 4.6 4.7, and 4.8 of the AFOLU Requirements: VCS Version 3.2. The AFLOU Requirements seem to require that categories are separately addressed.
Round 1 Response from Client (18 April 2012)	Addressed in the table added to the project boundaries section.
ESI Findings - Round 2 (23 April 2013)	Table 5 addresses all AFOLU project types and requirements for inclusion. Item is addressed.

Item No.	29
VCS AFOLU Requirements Version 3.4 (08 October 2013)	There are currently six AFOLU project categories under the VCS Program, as further described below. Proposed methodologies shall fall within one or more of these AFOLU project categories. Please list here which project category is being claimed and why it fits one of the categories. Please see pages 16-30bfor specific details of each category.
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Section 4; 4.2
ESI Findings - Round 1 (18 April 2012)	Proposed methodologies fall under ARR, IFM, and REDD. Terminology in FCOP is not completely consistent with VCS. The following terms are used in FCOP: afforestation, reforestation (does not include revegetation), improved forest management (some aspects not consistent with VCS), and conservation/avoided deforestation.
Round 1 NCR/CL/OFI (23 April 2012)	CL: Please again list in Section 4.1 which project categories are eligible. Please see pages 15-27 of the AFOLU Requirements for specific details of each category, and ensure the definitions are consistent between the two documents.
Round 1 Response from Client (18 April 2012)	The VCS AFOLU project categories have been specified in FCOP for VCS validated projects, and project boundary etc. issues restated accordingly. The use of the word "reforestation" has been replaced with "replanting" in the non-VCS sections, to avoid confusion.
ESI Findings - Round 2 (23 April 2013)	The six project categories have been listed in section 4.1 and applicability conditions stated in that section must be met if the project is to be accepted under FCOP. The protocol does not further explain these categories, instead requiring that project proponents clearly describe their project and associated practices and technologies in a project-specific greenhouse gas project plan.
Round 2 NCR/CL/OFI (10 June 2013)	CL: Please clarify why "Conservation / Avoided Deforestation" was added to Section 3 Definitions, but not other potential categories.
Round 2 Response from Client (23 August 2013)	This term has been changed to REDD. IFM and ARR are also defined in the definitions section.
ESI Findings - Round 3 (31 October 2013)	All instances of A/D have been changed to REDD. See Section 4.1. This item is addressed.

Item No.	30
VCS AFOLU Requirements Version 3.4 (08 October 2013)	4.3.1 The relevant carbon pools for AFOLU project categories are aboveground tree biomass (or aboveground woody biomass, including shrubs, in ARR, ALM and ACoGS projects), aboveground non-tree biomass (aboveground non-woody biomass in ARR and ALM projects), belowground biomass, litter, dead wood, soil (including peat) and wood products. Methodologies shall include the relevant carbon pools set out in Table 2 below.

Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Table 1, page 8; Section 5.2
ESI Findings - Round 1 (18 April 2012)	Table 1 of FCOP does not follow 4.3.1 Table 2: Carbon Pools to be Considered in Methodologies and its definitions for the project activities in the methodology. Project boundary per se is not defined in FCOP, although often alluded to. Terminology is generally inconsistent with VCS including the use of the terms carbon pool (not defined in the glossary), sources, and sinks.
Round 1 NCR/CL/OFI (23 April 2012)	NCR: Please address the findings.
Round 1 Response from Client (18 April 2012)	New table is consistent with 4.3.1 table 2. Carbon pool definition refined.
ESI Findings - Round 2 (23 April 2013)	FCOP now removed some terminology from the inconsistent definition of carbon pool in Section 3. It is unclear if the Methodology Developer is awaiting guidance from VCS on definitions per another item.
Round 2 NCR/CL/OFI (10 June 2013)	Per the response given for another item, please clarify if you are awaiting guidance on definitions.
Round 2 Response from Client (23 August 2013)	No further guidance expected
ESI Findings - Round 3 (31 October 2013)	This item has been satisfied through Section 5.2.2, Table 5. Item is addressed.

Item No.	31
VCS AFOLU Requirements Version 3.4 (08 October 2013)	Table 2: Carbon Pools to be Considered in Methodologies
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Table 1, page 8

ESI Findings - Round 1 (18 April 2012)	Table 1 of FCOP does not follow 4.3.1 Table 2: Carbon Pools to be Considered in Methodologies and its definitions for the project activities in the methodology. Carbon pools considered in FCOP include: standing live trees, shrubs and herbaceous understory, living roots, standing dead trees, lying dead trees, litter and forest floor, soil, harvested wood products in use, and harvested wood products in landfills, as well as forest carbon and wood product pools located outside of the project boundary that are indirectly affected by the project activity. These pools are nearly equivalent to the VCS pools but terminology is slightly different (less detailed in AFOLU) and, in FCOP, the guidance on whether a pool is optional or considered only when carbon reduction or additions are significant, is different than in AFOLU and, although it is stated by type of activity conducted, the activities in AFOLU (e.g. ARR, RIL, LtHP, etc.) are different that in FCOP (afforestation, reforestation, improved forest management, and conservation/avoided deforestation). (see 4.3.3 below as well).
Round 1 NCR/CL/OFI (23 April 2012)	NCR: Please address the finding.
Round 1 Response from Client (18 April 2012)	In discussions with VCS, they have agreed that as long as our categories are subsets of theirs, we may use more detailed categories. Project categories have been made consistent in the table.
ESI Findings - Round 2 (23 April 2013)	It is unclear whether HWPs are required in FCOP for ARR, ERA, and LtHP, as they are optional in VCS AFOLU Table 4.3.1. The assessor did note the quantification guidelines for HWP's in Section 8.1.1.2 of FCOP but did not see "Where the pool is included in the methodology, the methodology shall establish criteria and procedures to set out when a project proponent shall or may include the pool." It appears some of the notes in Table 5 are incomplete. This is similar for other categories that are optional in the AFOLU but included in the FCOP. It is unclear why the third REDD category is not used and if REDD-Urban/development is an acceptable category under VCS requirements.
Round 2 NCR/CL/OFI (10 June 2013)	Please confirm HWPs are required in FCOP for ARR, ERA, and LtHP, as they are optional in VCS AFOLU Table 4.3.1. The assessor did note the quantification guidelines for HWP's in Section 8.1.1.2 of FCOP but did not see "Where the pool is included in the methodology, the methodology shall establish criteria and procedures to set out when a project proponent shall or may include the pool." It appears some of the notes in Table 5 are incomplete. This is similar for other categories that are optional in the AFOLU but included in the FCOP. Please clarify why the third REDD category is not used, and explain if REDD-Urban/development is an acceptable category under VCS requirements.
Round 2 Response from Client (23 August 2013)	Yes, FCOP requires HWPs for all project types, and therefore does not include specific guidance on omission of this pool. However, we have added section 5.2.2.1 to address the mechanics of omission of pools or emissions as de minimis. We are unclear on the context of the urban/development question, which we cannot find in either the AFOLU Guidance or the draft methodology.

ESI Findings - Round 3 (31 October 2013)	The Assessor should have been more clear in the last NCR. Table 2 of the AFOLU Requirements contains three categories for REDD-APD projects. The third category requires accounting of above-ground non-tree biomass, while the first two do not. It is unclear if FCOP allows the third REDD category; further, FCOP contains the "Urban/development/infrastructure as baseline" REDD category, which is not consistent with the REDD categories as previously mentioned in Table 2.
Round 3 NCR/CL/OFI (01 November 2013)	NCR: Please address the finding. OFI: Please add a space between "PP7" and "Soil" in Table 2, and delete the extra period after "soils."
Round 3 Response from Client (17 January 2014)	1) FCOP does not include the third category, perennial tree crops. 2) While it is true that Table 2 does not include infrastructure development as a baseline use, it is specifically identified in AFOLU Requirements 4.2.9 1)b)iv) as a possible planned deforestation activity. Because this is the most likely cause of deforestation in BC, we have included it. Possibly you may wish to have a conversation with VCS regarding this discrepancy in the AFOLU Requirements. 3) Changes to PP7 in Table 2 have been made.
ESI Findings - Round 4 (14 February 2014)	ESI agrees with Developers assertion of inconsistency and has sent an email to VCS seeking clarification. Formatting changes made to the PP7 category.
Round 4 NCR/CL/OFI (18 February 2014)	Pending an email response from VCS on guidance on the issue.
Round 4 Response from Client (05 May 2014)	None.
ESI Findings - Round 5 (20 May 2014)	Email from VCS received on 27 May 2014 stating that there was an inconsistency in the AFOLU Requirements and that the first table was meant as a "guide" in understanding but not a requirement. Thus, the methodology's category of infrastructure development is in line with the AFOLU requirements, as all required pools are included in that category. This item can be addressed.

Item No.	32
VCS AFOLU Requirements Version 3.4 (08 October 2013)	*See Table on Pages 31 to 32 for Carbon Pools Considered. Please indicate what pools they are claiming and the justification.*
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Table 1 & 5
ESI Findings - Round 1 (18 April 2012)	Table 1 of FCOP does not follow 4.3.1 Table 2: Carbon Pools to be Considered in Methodologies and its definitions for the project activities in the methodology.

Round 1 NCR/CL/OFI (23 April 2012)	NCR: Please address the finding.
Round 1 Response from Client (18 April 2012)	New table is consistent with 4.3.1 Table 2. Carbon pool definition refined.
ESI Findings - Round 2 (23 April 2013)	Table 5 is consistent with AFOLU 4.3.1 Table 2. This item is addressed.

Item No.	33
VCS AFOLU Requirements Version 3.4 (08 October 2013)	4.3.2 Additional guidance and further requirements with respect to specific carbon pools and GHG sources are set out below in Sections 4.3.7 to 4.3.25.
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	N/A
ESI Findings - Round 1 (18 April 2012)	The specific tabs for the different project types were not included at this point in the methodology assessment, as there were many over-arching clarifications and non-conformances that still need to be addressed. These are TBD until later in the review process.
Round 1 NCR/CL/OFI (23 April 2012)	NCR: The specific tabs for the different project types were not included at this point in the methodology assessment, as there were many over-arching clarifications and non-conformances that still need to be addressed. These are TBD until later in the review process.
Round 1 Response from Client (18 April 2012)	No action at this time.
ESI Findings - Round 2 (23 April 2013)	Still pending separate resolution of AFOLU comments.
Round 2 NCR/CL/OFI (10 June 2013)	None
Round 2 Response from Client (23 August 2013)	None
ESI Findings - Round 3 (31 October 2013)	Still pending separate AFOLU comments
Round 3 NCR/CL/OFI (01 November 2013)	None

Round 3 Response from Client (17 January 2014)	Still no identified action required on this line.
ESI Findings - Round 4 (14 February 2014)	This specific NCR can be closed, as separate items have now been identified with regards to the specific project types that were not available at the time of initial Rounds of review. Item is addressed.

Item No.	34
VCS AFOLU Requirements Version 3.4 (08 October 2013)	4.3.3 Specific carbon pools and GHG sources, including carbon pools and GHG sources that cause project and leakage emissions, may be deemed *de minimis* and do not have to be accounted for if together the omitted decrease in carbon stocks (in carbon pools) or increase in GHG emissions (from GHG sources) amounts to less than five percent of the total GHG benefit generated by the project. The methodology shall establish the criteria and procedures by which a pool or GHG source may be determined to be *de minimis*. For example, peer reviewed literature or the CDM A/R methodological tool *Tool for testing significance of GHG emissions in A/R CDM project activities* may be used to determine whether decreases in carbon pools and increases in GHG emissions are *de minimis*.
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Section 5.0; 5.4.2.1; Table 7
ESI Findings - Round 1 (18 April 2012)	The purpose of this section of the methodology is to allow the user to define the relevant carbon pools. The relevant carbon pools must be listed in Table 2. Also, the methodology does not establish criteria and procedures by which a pool or GHG source may be determined to be de minimis.
Round 1 NCR/CL/OFI (23 April 2012)	OFI: Please address the finding.
Round 1 Response from Client (18 April 2012)	De minimis definition and criteria added. Other comments as above.
ESI Findings - Round 2 (23 April 2013)	There is still a typo in the definition of *de minimis.*
Round 2 NCR/CL/OFI (10 June 2013)	OFI: Please note the typo in the definition of *de minimis* (do versus does).
Round 2 Response from Client (23 August 2013)	Pools/sources are now plural, making "do" the correct word in this context.
ESI Findings - Round 3 (31 October 2013)	The methodology now uses proper grammar in the definition of *de minimis*. This item is addressed.

Item No.	35
VCS AFOLU Requirements Version 3.4 (08 October 2013)	Further, the following GHG sources may be deemed *de minimis* and need not be accounted for:
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Table 1, 5, and 6
ESI Findings - Round 1 (18 April 2012)	The sources for each eligible VCS project category, e.g., ARR, IFM, and REDD, are not delineated in FCOP.
Round 1 NCR/CL/OFI (23 April 2012)	NCR: Please delineate the sources for each eligible VCS project category, e.g., ARR, IFM, and REDD.
Round 1 Response from Client (18 April 2012)	New table added deals with these issues
ESI Findings - Round 2 (23 April 2013)	Tables 5 & 6 have incomplete notes.
Round 2 NCR/CL/OFI (10 June 2013)	CL: Tables 5 & 6 have incomplete notes. Please address.
Round 2 Response from Client (23 August 2013)	tables reformatted to show complete notes
ESI Findings - Round 3 (31 October 2013)	Tables 5 & 6 still contain overlapping notes that the Assessor cannot read.
Round 3 NCR/CL/OFI (01 November 2013)	NCR: Tables 5 & 6 still contain overlapping notes that the Assessor cannot read. Please address (perhaps this will resolve itself when a clean/final copy of FCOP is provided).
Round 3 Response from Client (17 January 2014)	Difficult to resolve, as this problem does not show up on the version provided. We will provide PDF as well to ensure that this problem is resolved.
ESI Findings - Round 4 (14 February 2014)	Table 5 & 6 are now legible in PDF format. Table 5 is legible in Word format, while Table 6 is not legible in Word format. However, the Assessor was able to review the PDF provided. This item is addressed.

Item No.	36
VCS AFOLU Requirements Version 3.4 (08 October 2013)	1) ARR, IFM and REDD: N_2O emissions from project activities that apply nitrogen containing soil amendments and N_2O emissions caused by microbial decomposition of plant materials that fix nitrogen. ALM projects that apply nitrogen fertilizer and/or manure or plant nitrogen fixing species shall account for N_2O emissions.
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Table 1, 5, and 6
ESI Findings - Round 1 (18 April 2012)	The sources for each eligible VCS project category, e.g., ARR, IFM, and REDD, are not delineated in FCOP.
Round 1 NCR/CL/OFI (23 April 2012)	NCR: Please delineate the sources for each eligible VCS project category, e.g., ARR, IFM, and REDD.
Round 1 Response from Client (18 April 2012)	New table added deals with these issues
ESI Findings - Round 2 (23 April 2013)	Tables 5 & 6 have incomplete notes.
Round 2 NCR/CL/OFI (10 June 2013)	CL: Tables 5 & 6 have incomplete notes. Please address.
Round 2 Response from Client (23 August 2013)	tables reformatted to show complete notes
ESI Findings - Round 3 (31 October 2013)	Tables 5 & 6 still contain overlapping notes that the Assessor cannot read.
Round 3 NCR/CL/OFI (01 November 2013)	NCR: Tables 5 & 6 still contain overlapping notes that the Assessor cannot read. Please address (perhaps this will resolve itself when a clean/final copy of FCOP is provided).
Round 3 Response from Client (17 January 2014)	Difficult to resolve, as this problem does not show up on the version provided. We will provide PDF as well to ensure that this problem is resolved.
ESI Findings - Round 4 (14 February 2014)	Table 5 & 6 are now legible in PDF format. The optional emission sources in Table 6 are in conformance with *de minimis* criteria and are conservatively applied. This item is addressed.

Item No.	37
VCS AFOLU Requirements Version 3.4 (08 October 2013)	2) ARR, IFM, REDD, ACoGS and WRC: GHG emissions from the removal or burning of herbaceous vegetation and collection of non-renewable wood sources for fencing of the project area.

Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Table 1, 5, and 6
ESI Findings - Round 1 (18 April 2012)	CH4 and N2O emissions resulting from the burning of herbaceous vegetation are considered relevant in FCOP if project emissions are > baseline emissions. CO2 emissions are not considered to be relevant because they are tracked by monitoring changes in stored carbon in relevant carbon pools. This is not consistent with AFOLU but is a higher standard.
Round 1 NCR/CL/OFI (23 April 2012)	NCR: Please delineate the sources for each eligible VCS project category, e.g., ARR, IFM, and REDD.
Round 1 Response from Client (18 April 2012)	New table added deals with these issues
ESI Findings - Round 2 (23 April 2013)	Tables 5 & 6 have incomplete notes.
Round 2 NCR/CL/OFI (10 June 2013)	CL: Tables 5 & 6 have incomplete notes. Please address.
Round 2 Response from Client (23 August 2013)	tables reformatted to show complete notes
ESI Findings - Round 3 (31 October 2013)	Tables 5 & 6 still contain overlapping notes that the Assessor cannot read.
Round 3 NCR/CL/OFI (01 November 2013)	NCR: Tables 5 & 6 still contain overlapping notes that the Assessor cannot read. Please address (perhaps this will resolve itself when a clean/final copy of FCOP is provided).
Round 3 Response from Client (17 January 2014)	Difficult to resolve, as this problem does not show up on the version provided. We will provide PDF as well to ensure that this problem is resolved.
ESI Findings - Round 4 (14 February 2014)	Table 5 & 6 are now legible in PDF format. The optional emission sources in Table 6 are in conformance with *de minimis* criteria and are conservatively applied. This item is addressed.

Item No.	38
VCS AFOLU Requirements Version 3.4 (08 October 2013)	3) ARR, IFM, REDD, ACoGS and WRC: Fossil fuel combustion from transport and machinery use in project activities. Where machinery use for selective harvesting activities may be significant in IFM project activities as compared to the baseline or where machinery use for earth moving activities may be significant in WRC project activities as compared to the baseline, emissions shall be accounted for if above de minimis, in accordance with this Section 4.3.3. Fossil fuel combustion from transport and machinery use in rewetting of drained peatland and conservation of peatland project activities need not be accounted for.
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Table 1, 5, and 6
ESI Findings - Round 1 (18 April 2012)	Fossil fuel combustion from vehicles and equipment used in project activities is considered to be relevant in FCOP if the project emissions exceed baseline. This is inconsistent with AFOLU but is a higher standard. The assertion that it is not common practice to directly monitor fuel combustion emissions is correct.
Round 1 NCR/CL/OFI (23 April 2012)	NCR: Please delineate the sources for each eligible VCS project category, e.g., ARR, IFM, and REDD.
Round 1 Response from Client (18 April 2012)	New table added deals with these issues
ESI Findings - Round 2 (23 April 2013)	Tables 5 & 6 have incomplete notes.
Round 2 NCR/CL/OFI (10 June 2013)	CL: Tables 5 & 6 have incomplete notes. Please address.
Round 2 Response from Client (23 August 2013)	tables reformatted to show complete notes
ESI Findings - Round 3 (31 October 2013)	Tables 5 & 6 still contain overlapping notes that the Assessor cannot read.
Round 3 NCR/CL/OFI (01 November 2013)	NCR: Tables 5 & 6 still contain overlapping notes that the Assessor cannot read. Please address (perhaps this will resolve itself when a clean/final copy of FCOP is provided).
Round 3 Response from Client (17 January 2014)	Difficult to resolve, as this problem does not show up on the version provided. We will provide PDF as well to ensure that this problem is resolved.

ESI Findings - Round 4 (14 February 2014)	Table 5 & 6 are now legible in PDF format. The optional emission sources in Table 6 are in conformance with *de minimis* criteria and are conservatively applied. This item is addressed.

Item No.	39
VCS AFOLU Requirements Version 3.4 (08 October 2013)	4.3.4 Specific carbon pools and GHG sources do not have to be accounted for if their exclusion leads to conservative estimates of the total GHG emission reductions or removals generated. The methodology shall establish criteria and procedures by which a project proponent may determine a carbon pool or GHG source to be conservatively excluded. Such conservative exclusion may be determined by using tools from an approved GHG program, such as the CDM A/R methodological tool *Procedure to determine when accounting of the soil organic carbon pool may be conservatively neglected in CDM A/R project activities,* or by using peer-reviewed literature.
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Table 1, 5, and 6, and Section 5.
ESI Findings - Round 1 (18 April 2012)	Fossil fuel combustion from vehicles and equipment used in project activities is considered to be relevant in FCOP if the project emissions exceed baseline. This is inconsistent with AFOLU but is a higher standard. The assertion that it is not common practice to directly monitor fuel combustion emissions is correct.
Round 1 NCR/CL/OFI (23 April 2012)	NCR: Please delineate the sources for each eligible VCS project category, e.g., ARR, IFM, and REDD.
Round 1 Response from Client (18 April 2012)	New table added deals with these issues
ESI Findings - Round 2 (23 April 2013)	Tables 5 & 6 have incomplete notes. Note: the following comment was pasted into 4.3.5 in the Round 1 comments. It is unclear how one-time-only emission sources, such as those associated with construction of project equipment and end-of-life decommissioning, were not considered to be typically material to overall GHG emission reduction calculations. It is unclear what is meant by the statement "BC offset-specific requirements related to emission reductions and removal enhancements occurring within British Columbia from controlled SSPs were also respected" from page 37 of Section 5.4.1.

Round 2 NCR/CL/OFI (10 June 2013)	CL: Tables 5 & 6 have incomplete notes. Please address and detail where FCOP establishes criteria for conservative exclusion. Note: the following comment was pasted into 4.3.5 in the Round 1 comments. Please re-visit in light of the requirement for 4.3.4. Please demonstrate how one-time-only emission sources, such as those associated with construction of project equipment and end-of-life decommissioning, were not considered to be typically material to overall GHG emission reduction calculations. Please clarify what is meant by the statement "BC offset-specific requirements related to emission reductions and removal enhancements occurring within British Columbia from controlled SSPs were also respected" from page 37 of Section 5.4.1.
Round 2 Response from Client (23 August 2013)	The de minimis rules have been clarified. I'm not sure what paragraph 3 of the revised NCR is requesting. The sentence quoted in paragraph 4 of the NCR is no longer in the methodology.
ESI Findings - Round 3 (31 October 2013)	The entire section about which pools to include/exclude in the baseline (Tables 7 & 8 from Expert's original comment) has been deleted. This item is addressed.

Item No.	40
VCS AFOLU Requirements Version 3.4 (08 October 2013)	4.3.5 Reductions of N_2O and/or CH_4 emissions are eligible for crediting if in the baseline scenario the project area would have been subject to livestock grazing, rice cultivation, burning and/or nitrogen fertilization.
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Table 1, page 8; Section 5.4.1
ESI Findings - Round 1 (18 April 2012)	It is unclear how one-time-only emission sources, such as those associated with construction of project equipment and end-of-life decommissioning, were not considered to be typically material to overall GHG emission reduction calculations. It is unclear what is meant by the statement "BC offset-specific requirements related to emission reductions and removal enhancements occurring within British Columbia from controlled SSPs were also respected" from page 37 of Section 5.4.1.
Round 1 NCR/CL/OFI (23 April 2012)	CL: Please demonstrate how one-time-only emission sources, such as those associated with construction of project equipment and end-of-life decommissioning, were not considered to be typically material to overall GHG emission reduction calculations. Please clarify what is meant by the statement "BC offset-specific requirements related to emission reductions and removal enhancements occurring within British Columbia from controlled SSPs were also respected" from page 37 of Section 5.4.1.

Round 1 Response from Client (18 April 2012)	This comment is confused : the AFOLU section quoted and the comment don't match - we need clarification. No clarification was provided in the revised document.
ESI Findings - Round 2 (23 April 2013)	This comment was inserted into the incorrect location and should have been under 4.3.4 above.
Round 2 NCR/CL/OFI (10 June 2013)	NCR: This comment was inserted into the incorrect location and should have been under 4.3.4 above. Please re-visit the comment in light of the requirement for 4.3.4 above, but this line can be addressed.

Item No.	41
VCS AFOLU Requirements Version 3.4 (08 October 2013)	4.4.1 The determination and establishment of a baseline scenario shall follow an internationally accepted GHG inventory protocol, such as the IPCC 2006 Guidelines for National GHG Inventories.
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Section 6.1.1
ESI Findings - Round 1 (18 April 2012)	FCOP states that the establishment of a baseline scenario will follow requirements in the draft Federal Guide for Protocol Developers, although it is noted that the Federal Guide provides very few specific selection criteria for determining which approach should be used. The assessor believes the baseline approach of FCOP is not straightforward, is too voluminous, and is not geared toward a project proponent/developer's needs.
Round 1 NCR/CL/OFI (23 April 2012)	CL: Please refer to additional NCRs regarding the baseline and consider revising this section.
Round 1 Response from Client (18 April 2012)	FCOP now uses the standard CDM baseline method
ESI Findings - Round 2 (23 April 2013)	It is unclear which internationally accepted GHG inventory protocol for determination and establishment of a baseline scenario was followed.
Round 2 NCR/CL/OFI (10 June 2013)	CL: For clarity, in Section 1 and anywhere else relevant, please state which internationally accepted GHG inventory protocol for determination and establishment of a baseline scenario was followed.
Round 2 Response from Client (23 August 2013)	Text added to sections 1 and 7
ESI Findings - Round 3 (31 October 2013)	The CDM Combined Tool is now being referenced. This item is addressed.

Item No.	42
VCS AFOLU Requirements Version 3.4 (08 October 2013)	4.5.1 Methodologies shall establish procedures to quantify the GHG emissions or removals for the project and baseline scenario. The *IPCC 2006 Guidelines for National GHG Inventories* or the *IPCC 2003 Good Practice Guidance for Land Use, Land-Use Change and Forestry* shall be used as guidance for quantifying increases or decreases in carbon stocks and GHG emissions. The IPCC Guidelines shall also be followed in terms of quality assurance/quality control (QA/QC) and uncertainty analysis.
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Intro
ESI Findings - Round 1 (18 April 2012)	Introductory sections of the FCOP protocol reference the IPCC 2006 Guidelines as a source of good practice guidance and the quantification procedure for fertilizer use references part of it, but the protocol does not specifically state that the IPCC 2006 Guidelines for National GHG Inventories or the IPCC 2003 Good Practice Guidance for Land Use, Land-Use Change and Forestry shall be used as guidance for quantifying increases or decreases in carbon stocks and GHG emissions. No procedures were identified for baseline and project emissions for each separate project activity and category.
Round 1 NCR/CL/OFI (23 April 2012)	NCR: Please include missing information.
Round 1 Response from Client (18 April 2012)	Reference to consistency with IPCC GPG for LULUCF added to beginning of section 8. FCOP was re-organized to conform with section headings in methodology template regarding quantification of baseline and project scenarios.
ESI Findings - Round 2 (23 April 2013)	Reference is now made to IPCC 2003 GPG in Section 8.0 of the methodology. This item is addressed.

Item No.	43
VCS AFOLU Requirements Version 3.4 (08 October 2013)	4.5.3 Where carbon would have been lost in the baseline scenario due to land use conversion or disturbance, GHG emissions from soil carbon, belowground biomass, wood products and dead wood carbon pools generally occur over a period of time following the event. It shall not be assumed that all GHG emissions from these carbon pools in the project categories specified below occur instantaneously or within a short period of time.
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Section 8.1.1
ESI Findings - Round 1 (18 April 2012)	The pattern of decay for HWP both in-use and in a landfill is described in detail, but emissions from soil carbon, below-ground biomass, wood products and dead wood carbon pools relating to land use conversion or disturbance is not directly addressed in FCOP.
Round 1 NCR/CL/OFI (23 April 2012)	NCR: Please provide the missing information.

Round 1 Response from Client (18 April 2012)	These items are outputs of the models used to estimate the emissions from these pools in section 8.1 (8.1.1.1 specifically) and 8.2
ESI Findings - Round 2 (23 April 2013)	The equations relating to baseline establishment do include a requirement to provide information over time t. This item is now addressed.

Item No.	44
VCS AFOLU Requirements Version 3.4 (08 October 2013)	Methodologies shall set out criteria and procedures to reliably establish the pattern of carbon loss over time using empirical evidence, such as studies that use primary data or locally calibrated models, or methodologies shall apply an appropriate decay model (such as a linear or exponential decay function) that is scientifically sound, based on empirical evidence and not likely to overestimate early carbon losses.
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Section 8.1/8.1.1
ESI Findings - Round 1 (18 April 2012)	Please refer to 4.5.3. Quantification methodologies for controlled carbon pools are described in Section 8.1, but they are general and do not associate methods with any particular pool (e.g., lying dead wood). Section 8.1.1 provides general direction on approaches (periodic direct measurement by sampling or projection using suitable stand level growth and/or carbon models) and data collection standards, and suggests some models related to carbon production, especially regarding harvest flow, but it does not directly address decay models.
Round 1 NCR/CL/OFI (23 April 2012)	OFI: Please include the missing information.
Round 1 Response from Client (18 April 2012)	The models referenced use locally calibrated decay and related functions.
ESI Findings - Round 2 (23 April 2013)	A minimum sample is required even when LCL and UCL are used. This does not need to be specified in FCOP if a statement has already been included that a justified statistically valid approach must be used.
Round 2 NCR/CL/OFI (10 June 2013)	OFI: Please remove the statement about not requiring a minimum sample intensity under 8.1.1.1, Field Sample Method (Direct Measurement), as it appears to be inconsistent with general requirements in FCOP to ensure statistical validity (sample plot locations and numbers must be based on a justified statistically valid approach appropriate for the project site). A minimum sample is required even when LCL and UCL are used. This does not need to be specified in FCOP if a statement has already been included that a justified statistically valid approach must be used.
Round 2 Response from Client (23 August 2013)	Guidance meeting this requirement had been given in the preceding bullets, and has now been re-iterated in this paragraph.

ESI Findings - Round 3 (31 October 2013)	The following statement was added, which addresses the NCR: "whereas noted above, sampling locations and intensities shall be determined using a justified statistically valid approach appropriate for the project site . Where the width of the 90 percent confidence interval of the sampled data exceeds +/-10% of the estimated value, the amount that the calculated confidence interval is greater than +/- 10% shall be added to the average (in the case of the baseline scenario), or subtracted from the average (in the case of the project scenario), and the resulting number used in quantification of carbon in the sampled carbon pool. Methods used for estimating uncertainty shall be based on recognized statistical approaches such as those described in the IPCC Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories." This item is addressed.

Item No.	45
VCS AFOLU Requirements Version 3.4 (08 October 2013)	Where appropriate, belowground biomass, soil carbon and dead wood decay models shall be calibrated. Where models are calibrated using measurement plots or data from research plots, sound and reliable measurement methods shall be applied as set out in Section 4.8.3.
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Section 8.1
ESI Findings - Round 1 (18 April 2012)	It is unclear where projects use calibration in models, sound and reliable measurement methods shall be applied as set out in Section 4.8.3.
Round 1 NCR/CL/OFI (23 April 2012)	NCR: Please include that where projects use calibration in models, sound and reliable measurement methods shall be applied as set out in Section 4.8.3.
Round 1 Response from Client (18 April 2012)	Statement added to ensure appropriate data collection methods for calibration data.
ESI Findings - Round 2 (23 April 2013)	While the FCOP does not directly indicate where it is appropriate to calibrate models or that any particular model will be calibrated, it does indicate that in all cases, field measurements may be needed to initially calibrate a chosen model or model inputs and that when any field sampling is conducted, results must be used to re-calibrate model results. In the verifier's experience, not all the models suggested under the protocol are calibrated for local conditions with respect to below ground biomass, soil carbon, or deadwood decay. However, the required data collection standards for re-calibration are well tested and widely accepted. The PD specifically indicates that plot or other data for calibration shall be gathered using sound and reliable measurement methods consistent with VRI or NFI standards, or methods contained in validated VCS modules. In the verifier's experience the suggested standards provide a high level of confidence in data quality. Finally, while validation and calibration are different, the PD indicates that a model must be parameterized and validated for the general conditions of the project land area (section 8.1.1.1.2).
Round 2 NCR/CL/OFI (10 June 2013)	NCR: Clearly indicate under what circumstances models used in the protocol must be calibrated.

Round 2 Response from Client (23 August 2013)	8.1.1.1.2 has been edited to provide additional guidance on when model calibration must be done, and when it could be done.
ESI Findings - Round 3 (31 October 2013)	Section 8.1.1.1.2 now includes a requirement that models must be calibrated and proof must be provided that models were calibrated. Language has been included that describe the circumstances that would require model calibrations. This item is addressed.

Item No.	46
VCS AFOLU Requirements Version 3.4 (08 October 2013)	Where the following carbon pools are included in the project boundary, methodologies may opt to comply with the requirement to establish a pattern of carbon loss over time by incorporating the respective procedures below:
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Section 8.1
ESI Findings - Round 1 (18 April 2012)	Pending above responses and revisions.
Round 1 NCR/CL/OFI (23 April 2012)	None
Round 1 Response from Client (18 April 2012)	Note - it is unlikely that some of these decay functions would be conservative. For instance, red cedar deadwood may be resident for hundreds of years - cases are known of sound shakebolts being cut from trees down for more than 500 years.
ESI Findings - Round 2 (23 April 2013)	Pending 4.5.3 (4) below.
Round 2 NCR/CL/OFI (10 June 2013)	None
Round 2 Response from Client (23 August 2013)	We did not elect to use these decay functions, which are significantly non-conservative in some instances (For instance, deadwood decay in coastal forests is far slower than the default, and if the default were used in estimating the baseline, would result in a significant over-estimation of emissions from the baseline.)
ESI Findings - Round 3 (31 October 2013)	This section has been substantially rewritten, reflecting current research and tools for tracking HWP decay. This item is now addressed.

Item No.	47
VCS AFOLU Requirements Version 3.4 (08 October 2013)	4) Wood products pool in IFM and REDD. The pattern of carbon loss shall be modeled as follows: a) For short-term wood products and wood waste that would decay within 3 years, all carbon shall be assumed to be lost immediately. b) For medium-term wood products that are retired between 3 and 100 years, a 20-year linear decay function shall be applied. c) For long-term wood products that are considered permanent (i.e., carbon is stored for 100 years or more), it may be assumed no carbon is released.
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Section 8.1
ESI Findings - Round 1 (18 April 2012)	Pending above responses and revisions.
Round 1 NCR/CL/OFI (23 April 2012)	None
Round 1 Response from Client (18 April 2012)	None
ESI Findings - Round 2 (23 April 2013)	Although this would appear n/a, as FCOP did not opt to use 4.5.3 #4, the assessor is aware of relevant and accurate research for BC via Caren Dymond. The assertion in FCOP is that "the large majority of BC HWPs are either used in Canada or exported to the US, and that Canada and the US share similar usage patterns for solid wood and paper HWPs". The assessor's understanding is that this is inaccurate. Currently, about half of all BC lumber is exported to places other than the US and Ms. Dymond's work, although it considers patterns in the US, is more about patterns in Canada.
Round 2 NCR/CL/OFI (10 June 2013)	NCR: Please address the finding.
Round 2 Response from Client (23 August 2013)	The HWP section has been varies substantially redrafted to address these concerns. The section now addresses both North American use (using the data and approaches in Dymond 2012), and offshore use (using data from Winjum et al 1998, as well as some data from Dymond). See the accompanying word document for a detailed explanation of the data and methods used.
ESI Findings - Round 3 (31 October 2013)	This section has been substantially rewritten, reflecting current research and tools for tracking HWP decay. This item is addressed.

Item No.	48
VCS AFOLU Requirements Version 3.4 (08 October 2013)	4.6.1 Methodologies shall establish procedures to quantify all significant sources of leakage. Leakage is defined as any increase in GHG emissions that occurs outside the project boundary (but within the same country), and is measurable and attributable to the project activities. All leakage shall be accounted for, in accordance with this Section 4.6. The three types of leakage are:
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Table 9, pages 55-57
ESI Findings - Round 1 (18 April 2012)	Methodologies have been provided in FCOP to quantify leakage, but there is no reference to the fact that the leakage must occur within Canada. Language in FCOP implies that the area of interest for leakage is within British Columbia, but this is not explicitly stated. Instead the protocol allows the proponent to define an appropriate geographic area surrounding the project area, for assessment of land-use shifting and harvest shifting, considering economic and other relevant factors. This does not appear to conform to the VCS requirement.
Round 1 NCR/CL/OFI (23 April 2012)	NCR: Please address the finding.
Round 1 Response from Client (18 April 2012)	For land use shifting leakage (activity shifting leakage) selection of an appropriate area, equivalent to a leakage zone, is discussed. This approach is consistent with VCS approaches for activity shifting leakage. For harvest shifting leakage (market leakage) FCOP assesses leakage on a North America wide basis. In discussions with VCS they have indicated that leakage is not required to be calculated beyond national boundaries, but that such calculations are not forbidden.
ESI Findings - Round 2 (23 April 2013)	Methodologies to determine leakage have been described for both market leakage (indicated to be equivalent to harvest shifting leakage) and activity shifting leakage. The methodology identifies procedures for quantifying these. This item is addressed.

Item No.	49
VCS AFOLU Requirements Version 3.4 (08 October 2013)	1) Market leakage occurs when projects significantly reduce the production of a commodity causing a change in the supply and market demand equilibrium that results in a shift of production elsewhere to make up for the lost supply.
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Section 8.3
ESI Findings - Round 1 (18 April 2012)	It is unclear if market leakage is included in FCOP to be addressed by projects.
Round 1 NCR/CL/OFI (23 April 2012)	CL: Please clarify if market leakage is included in FCOP to be addressed by projects.

Round 1 Response from Client (18 April 2012)	The category "harvest shifting leakage" in FCOP is equivalent to large scale market leakage, and the methods used to assess it are standard market leakage methods.
ESI Findings - Round 2 (23 April 2013)	The relationship between harvest shifting leakage and market leakage is described in section 8.3.1.2.3. This item is addressed.

Item No.	50
VCS AFOLU Requirements Version 3.4 (08 October 2013)	2) Activity-shifting leakage occurs when the actual agent of deforestation and/or forest or wetland degradation moves to an area outside of the project boundary and continues its deforestation or degradation activities elsewhere.
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Section 8.3
ESI Findings - Round 1 (18 April 2012)	It is unclear if activity shifting leakage is included in FCOP to be addressed by projects.
Round 1 NCR/CL/OFI (23 April 2012)	CL: Please clarify if activity shifting leakage is included in FCOP to be addressed by projects.
Round 1 Response from Client (18 April 2012)	The category "land use shifting leakage" in FCOP includes activity shifting leakage, as well as including some local market leakage where the commodity in question is land. The methods given are appropriate to this type of leakage.
ESI Findings - Round 2 (23 April 2013)	The relationship between activity shifting leakage and land-use shifting in FCOP is unclear.
Round 2 NCR/CL/OFI (10 June 2013)	CL: The relationship between activity shifting leakage and land-use shifting needs to be explained. Please address.
Round 2 Response from Client (23 August 2013)	Terminology has now been standardized to "activity shifting leakage" as per VCS norms
ESI Findings - Round 3 (31 October 2013)	Land use shifting leakage has now been changed to activity shifting leakage. The definition and application of the concept meet the intent of the VCS standard. This item is addressed.

Item No.	51
VCS AFOLU Requirements Version 3.4 (08 October 2013)	4.6.2 Leakage that is determined, in accordance with Section 4.3.3, to be below de minimis (i.e., insignificant) does not need to be included in the GHG emissions accounting. The significance of leakage may also be determined using the CDM A/R methodological tool *Tool for testing significance of GHG Emissions in A/R CDM Project Activities.*

Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Section 8.3
ESI Findings - Round 1 (18 April 2012)	It is unclear in FCOP how the determination of the significance of leakage to be de minimis will be addressed by project proponents/developers.
Round 1 NCR/CL/OFI (23 April 2012)	CL: Please clarify in FCOP how the determination of the significance of leakage to be de minimis will be addressed by project proponents/developers. Please address.
Round 1 Response from Client (18 April 2012)	Text added to introduction to 8.3
ESI Findings - Round 2 (23 April 2013)	A sentence was added to Section 8.3 indicating that where total leakage from all sources is found to be *de minimis*, leakage does not need to be included in the GHG emissions accounting. This item is addressed.

Item No.	52
VCS AFOLU Requirements Version 3.4 (08 October 2013)	4.6.3 GHG emissions from leakage may be determined either directly from monitoring, or indirectly when leakage is difficult to monitor directly but where scientific knowledge provides credible estimates of likely impacts. The GHG credit calculation table provided below in Section 4.7 includes an example of indirect leakage accounting.
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Section 8.3
ESI Findings - Round 1 (18 April 2012)	It is unclear in FCOP how GHG emissions will be determined (indirectly or through monitoring) by a project proponent/developer.
Round 1 NCR/CL/OFI (23 April 2012)	NCR: Please clearly state in FCOP how GHG emissions will be determined (indirectly or through monitoring) by a project proponent/developer.
Round 1 Response from Client (18 April 2012)	Text added to 8.3.1.1 to address this issue for land use shifting leakage. Quantification procedures for harvest shifting leakage are dealt with extensively in FCOP.
ESI Findings - Round 2 (23 April 2013)	A procedure and equations have been provided describing how GHG emissions from leakage may be determined. This item is addressed.

Item No.	53
VCS AFOLU Requirements Version 3.4 (08 October 2013)	4.6.4 Projects shall account for market leakage where the production of a commodity (e.g., timber, aquacultural products or agricultural products) is significantly affected by the project. The significance of timber production is determined as set out in Section 4.3.3 above or as set out in Section 4.6.14 below.
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Section 8.3
ESI Findings - Round 1 (18 April 2012)	It appears the definition of "significance" of a commodity in FCOP is inconsistent with that of VCS AFOLU Requirements.
Round 1 NCR/CL/OFI (23 April 2012)	NCR: Please clarify finding and revise as appropriate.
Round 1 Response from Client (18 April 2012)	Dealt with in the introduction to 8.3.1.2. No change required.
ESI Findings - Round 2 (23 April 2013)	The FCOP states that harvest shifting leakage must only be assessed in a given reporting period where project HWP production, in terms of amount of carbon or carbon dioxide stored, is less than baseline HWP production. It can be inferred from this statement that harvest shifting leakage is not significant unless Project HWP production is less than baseline production. This item is addressed.

Item No.	54
VCS AFOLU Requirements Version 3.4 (08 October 2013)	4.6.5 Leakage occurring outside the host country (international leakage) does not need to be quantified.
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Item # 2, starting on Page 128
ESI Findings - Round 1 (18 April 2012)	VCS states that leakage occurring outside the country does not need to be quantified. FCOP requires that it be addressed. Although addressing this form of leakage may be considered more conservative, this section is not in conformance with VCS.
Round 1 NCR/CL/OFI (23 April 2012)	NCR: Please revise referenced section.
Round 1 Response from Client (18 April 2012)	As discussed above, VCS has confirmed that the wording is "does not need to", rather than "must not", and therefore leakage outside of national boundaries may be addressed.
ESI Findings - Round 2 (23 April 2013)	The verification team now understands the interpretation to be the same as the methodology. As what the methodology is requiring is more conservative, this item is addressed.

Item No.	55
VCS AFOLU Requirements Version 3.4 (08 October 2013)	4.6.6 Where leakage mitigation measures include tree planting, aquacultural intensification, agricultural intensification, fertilization, fodder production, other measures to enhance cropland and/or grazing land areas, leakage management zones or a combination of these, then any significant increase in GHG emissions associated with these activities shall be accounted for, unless deemed de minimis (as set out in Section 4.3.3) or can be conservatively excluded (as set out in Section 4.3.4).
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	n/a
ESI Findings - Round 1 (18 April 2012)	It does not appear that leakage mitigation is addressed in FCOP.
Round 1 NCR/CL/OFI (23 April 2012)	NCR: Please address the finding.
Round 1 Response from Client (18 April 2012)	Text added to section 8.3, and to subsections below, to address the issue of leakage mitigation, and potential emissions from leakage mitigation activities.
ESI Findings - Round 2 (23 April 2013)	Revisions in section 8.3 address leakage mitigation. This item is addressed.

Item No.	56
VCS AFOLU Requirements Version 3.4 (08 October 2013)	4.6.7 Projects shall not account for positive leakage (i.e., where GHG emissions decrease or removals increase outside the project area due to project activities).
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Section 8.3
ESI Findings - Round 1 (18 April 2012)	The intent of this requirement appears to be met in the second paragraph of Section 8.3; however, the definitions of positive and negative leakage are directly inconsistent with VCS.
Round 1 NCR/CL/OFI (23 April 2012)	NCR: Please revise where appropriate.
Round 1 Response from Client (18 April 2012)	Revised.
ESI Findings - Round 2 (23 April 2013)	Projects not accounting for positive leakage now directly addressed in the introduction to Section 8.3. This item is addressed.

Item No.	57
VCS AFOLU Requirements Version 3.4 (08 October 2013)	4.7.1 Methodologies shall establish procedures for quantifying net GHG emission reductions and removals (the net GHG benefit), which shall be quantified as the difference between the GHG emissions and/or removals, and/or as the difference between carbon stocks, from GHG sources, sinks and carbon pools in the baseline scenario and the project scenario. The GHG emissions and/or removals in the project scenario shall be adjusted for emissions resulting from project activities and leakage. Methodologies shall also establish procedures for quantifying the net change in carbon stocks, so that the number of buffer credits withheld in the AFOLU pooled buffer account and market leakage emissions may be quantified for the project.
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Section 9.3.5.2
ESI Findings - Round 1 (18 April 2012)	The assessor believes that procedures for quantifying GHGs should be outlined separately for each project activity and category. Also, the assessor believes Section 10 addressing risk mitigation needs to be more detailed and robust.
Round 1 NCR/CL/OFI (23 April 2012)	NCR: The assessor believes that procedures for quantifying GHGs should be outlined separately for each project activity and category. Please provide or demonstrate why not. Also, the assessor believes Section 10 addressing risk mitigation needs to be more detailed and robust. Please address.
Round 1 Response from Client (18 April 2012)	We believe that precedents in other methodologies do not support their being a requirement to separately address each project activity and category, except in so much as specific restrictions or requirements must be appropriately noted. We believe that section 9.3.5. addresses issues of risk identification, tracking and mitigation.
ESI Findings - Round 2 (23 April 2013)	Procedures for quantifying net GHG emission reductions and removals were provided. Procedures were found to adjust emissions and/or removals in the project scenario resulting from project activities and leakage. With respect to risk mitigation, FCOP Section 9.3.5.2 indicates that proponents must demonstrate how the results of a risk assessment are used to develop a mitigation and contingency plan but does not specify criteria and requirements around specific risk mitigation and contingency approaches. It does however, state that the proponent must demonstrate that contingency plans will be sufficient to ensure that the proponent is able to replace or retire a sufficient quantity of offset credits to make up for any reversals that may occur during the period of the entire project and provides a number of potential risk mitigation options. This satisfies the requirements of the methodology. This item is addressed.

Item No.	58
VCS AFOLU Requirements Version 3.4 (08 October 2013)	4.7.2 The number of GHG credits issued to projects is determined by subtracting out the buffer credits from the net GHG emission reductions or removals (including leakage) associated with the project. The buffer credits are calculated by multiplying the non-permanence risk rating (as determined by the AFOLU Non-Permanence Risk Tool) times the change in carbon stocks only. The full rules and procedures with respect to assignment of buffer credits are set out in VCS document Registration and Issuance Process. This calculation process is illustrated in the example below-see page 59.
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Section 9.3.5
ESI Findings - Round 1 (18 April 2012)	FCOP does not require the use of the most updated VCS AFOLU Non-Permanence Risk Tool.
Round 1 NCR/CL/OFI (23 April 2012)	NCR: FCOP does not require the use of the most updated VCS *AFOLU Non-Permanence Risk Tool*. Please require the use of this tool.
Round 1 Response from Client (18 April 2012)	Wording clarified in section 9.3.5.
ESI Findings - Round 2 (23 April 2013)	It is unclear whether the calculation of buffer credits by multiplying the non-permanence risk rating (as determined by the AFOLU Non-Permanence Risk Tool) times the change in carbon stocks is required.
Round 2 NCR/CL/OFI (10 June 2013)	NCR: Ensure that the calculation of buffer credits by multiplying the non-permanence risk rating (as determined by the AFOLU Non-Permanence Risk Tool) times the change in carbon stocks is clearly required.
Round 2 Response from Client (23 August 2013)	This is a programmatic not a methodological issue, and is not normally addressed in a methodology
ESI Findings - Round 3 (31 October 2013)	The language has been changed to require the use of the tool in Section 9.3.5. This item is addressed.

Item No.	59
VCS AFOLU Requirements Version 3.4 (08 October 2013)	4.8.1 The methodology shall establish criteria and procedures for monitoring, and specify the data and parameters to be monitored, as set out in the *VCS Standard.*

Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Section 9.3
ESI Findings - Round 1 (18 April 2012)	Monitoring requirements in Section 8 for controlled and related sources (but not controlled or affected carbon pools) are stated in very general terms under "Determine Activity Levels". For example, for fertilization it simply says "quantities of different types of fertilizer applied are to be monitored during the project". The parameter, method, and frequency of monitoring are stated in general terms in Table 19. Only parameters that must be either monitored or estimated for specific SSPs, and associated equations, are noted in this table. Other data and information related to other aspects of complying with the protocol that may require monitoring are not listed. For example, the specific monitoring requirements for live and dead forest carbon pools, are not detailed.
Round 1 NCR/CL/OFI (23 April 2012)	NCR: Please address the finding and ensure consistency with VCS. Also, please provide the separate procedures for monitoring of each project activity and category.
Round 1 Response from Client (18 April 2012)	As above, we do not believe that separate procedures for each project activity and category are required. We believe that appropriate standards for monitoring have been given for the variables used in FCOP within the relevant sections.
ESI Findings - Round 2 (23 April 2013)	Section 9.3 describes the requirements of a monitoring plan including some criteria and procedures for monitoring, and the data and parameters to be monitored. Aspects of the text are unclear however as indicated in the following examples: are primary monitoring procedures different from other procedures and if so, what other procedures are there? A project proponent is expected to fully document project-specific details of each of these methodologies (which methodologies?), Prepare a Monitoring Plan describing how these tasks will be implemented (which tasks are being referred to?), The rationale of monitoring project implementation is to document all project activities implemented by the project activity (what does this mean?), Do the following: (what does this refer to?), PDD (define), Refer to the relevant modules for the variables to be measured (modules in what?), what is the difference between The monitoring plan must detail: and The monitoring plan should include the following details:?, How methods and procedures given in each relevant module will be used to estimate the values of monitored variables (relevant modules in what document?), etc.
Round 2 NCR/CL/OFI (10 June 2013)	NCR: Please address the finding and rewrite Sections of 9.3 with ambiguous language.
Round 2 Response from Client (23 August 2013)	This section has been edited to address a number of problems with ambiguity and inconsistent terminology.

ESI Findings - Round 3 (31 October 2013)	Although the section has been rewritten to remove some of the ambiguity, it is still not clear which procedures are used for which data. Section 8 describes procedures for quantification of each SSP. Sections 9.1 (Data and Parameters Available) and 9.2 (Data and Parameters Monitored) are tables listing "parameters" such as Emissions of GHG and the source of data for each, but are not actually referred to anywhere in the text in section 8 or 9. Section 9.3 does not provide specific procedures for any particular type of data or parameter but does state that the project proponent is expected to fully document project-specific details of the steps that will be taken to monitor each "variable". No explanation for how these different terms (SSP, parameters, data, standard, variables) are related is provided anywhere. Nor is it clear how "quantification requirements in section 8 represent the minimum monitoring requirements for each variable". Please provide explanatory text stating how section 8, section 9.1, section 9.2, and section 9.3 are related.
Round 3 NCR/CL/OFI (01 November 2013)	CL: Please address the finding.
Round 3 Response from Client (17 January 2014)	There is some ambiguity here. While "data and parameters." is a term in a required heading in the VCS methodology and PD formats, standardizing on this term results in text which is very difficult to read. We have therefore added text in 9.3 para 1 to establish equality between "data and parameters" and "variables", and have standardized to the term "variables" there-after in section 9.3. We have also added text to explain the relationship between Section 8 and sections 9.1 and 9.2, and text to clarify the relevance of section 8 to monitoring procedures.
ESI Findings - Round 4 (14 February 2014)	FCOP now includes added language in Section 9.3 that equates "Data and Parameters" to "Variables." However, these terms still exist throughout FCOP prior to Section 9.3 and could still cause confusion.
Round 4 NCR/CL/OFI (18 February 2014)	OFI: As "Data and Parameters" is terminology used throughout VCS documents, the Assessor recommends changing FCOP language to be consistent, for clarification purposes. Since the term "Parameter" is used throughout FCOP, please define it as a variable prior to its mention in Section 9.3. Please include all terms in the "Definitions" Section 3.
Round 4 Response from Client (05 May 2014)	A definition of the term "parameter" has been added to the definitions section.
ESI Findings - Round 5 (20 May 2014)	As the term has been added to the definitions section, this item is addressed.

Item No.	60
VCS AFOLU Requirements Version 3.4 (08 October 2013)	4.8.3 Where measurement plots or data from research plots are used to calibrate belowground biomass, soil carbon and dead wood decay models (as described above in Section 4.5.3), sound and reliable methods for monitoring changes in carbon stocks, including representative location of samplings sites and sufficient frequency and duration of sampling shall be applied. In addition, plots used to calibrate soil carbon models shall be measured considering appropriate sampling depths, bulk density and the estimated impact of any significant erosion (or plots with significant erosion shall be avoided). Data used to calibrate belowground biomass and dead wood models shall consider an estimation of oven-dry wood density and the state of decomposition.

Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Section 8.1, 9
ESI Findings - Round 1 (18 April 2012)	For live and dead forest carbon pools, specific monitoring requirements are not detailed (see Section 8.1, Subsection 9 of FCOP). For soil sampling, direction on items like sampling depths, bulk density, erosion and oven-dry wood density and the state of decomposition is not provided.
Round 1 NCR/CL/OFI (23 April 2012)	NCR: Please provide and detail missing information from the finding.
Round 1 Response from Client (18 April 2012)	These issues are covered off in the sampling and monitoring methods (VRI, NFI, relevant VCS modules) referenced in FCOP.
ESI Findings - Round 2 (23 April 2013)	VRI and NFI data collection procedures are very high. Because below ground biomass is often based on shoot to root ratios (for trees at least), such data will provide quality information for below ground biomass even if the protocol does not specifically address below ground conditions (for example, the most common yield model used in BC is TASS and it does include a root to shoot ratio for most tree species). Furthermore, approved VCS Module VMD0001 is one example of a protocol that has been referenced in FCOP that could be used instead of VRI or NFI, thus providing a sound and reliable method for monitoring change in below ground carbon stocks. This item is addressed.

Item No.	61
VCS AFOLU Requirements Version 3.4 (08 October 2013)	5.1.1 Non-Permanence risk analysis and market leakage evaluations shall be assessed by validation/ verification bodies that are eligible to perform either validation or verification under the VCS Program for sectoral scope 14 (AFOLU). The project proponent shall contract the validation/ verification body (i.e., the VCSA is not involved in the process).
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Section 9
ESI Findings - Round 1 (18 April 2012)	FCOP does not currently ensure that "Non-Permanence risk analysis and market leakage evaluations shall be assessed by validation/ verification bodies that are eligible to perform either validation or verification under the VCS Program for sectoral scope 14 (AFOLU)."
Round 1 NCR/CL/OFI (23 April 2012)	NCR: Please ensure that "Non-Permanence risk analysis and market leakage evaluations shall be assessed by validation/ verification bodies that are eligible to perform either validation or verification under the VCS Program for sectoral scope 14 (AFOLU)."
Round 1 Response from Client (18 April 2012)	As discussed with ESI, this is a programmatic issue, and no response is required.
ESI Findings - Round 2 (23 April 2013)	The verification team aggress that this item is programmatic in nature, and it can now be considered addressed.

Item No.	62
VCS AFOLU Requirements Version 3.4 (08 October 2013)	5.1.2 The validation/verification body shall assess the risk analysis carried out by the project proponent in accordance with VCS document AFOLU Non-Permanence Risk Tool. The project proponent shall respond to all and any of the validation/verification body's findings. As a result of any such findings, the project proponent shall amend the documentation as necessary and update the risk rating accordingly
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Section 9
ESI Findings - Round 1 (18 April 2012)	FCOP does not currently ensure that the latest VCS AFOLU Non-Permanence Risk Tool is required by the project and does not include a requirement in FCOP that "the validation/verification body shall assess the risk analysis carried out by the project proponent in accordance with VCS document AFOLU Non-Permanence Risk Tool. The project proponent shall respond to all and any of the validation/verification body's findings. As a result of any such findings, the project proponent shall amend the documentation as necessary and update the risk rating accordingly."
Round 1 NCR/CL/OFI (23 April 2012)	NCR: Please ensure the latest VCS *AFOLU Non-Permanence Risk Tool* is required by the project, and include a requirement in FCOP that "the validation/verification body shall assess the risk analysis carried out by the project proponent in accordance with VCS document AFOLU Non-Permanence Risk Tool. The project proponent shall respond to all and any of the validation/verification body's findings. As a result of any such findings, the project proponent shall amend the documentation as necessary and update the risk rating accordingly."
Round 1 Response from Client (18 April 2012)	The tool has been references, as per item #128. The remainder of this NCR addresses programmatic issues.
ESI Findings - Round 2 (23 April 2013)	The reference to the Risk tool appears vague.
Round 2 NCR/CL/OFI (10 June 2013)	NCR: Please ensure that it is clear that the latest VCS AFOLU Non-Permanence Risk Tool is required in undertaking a non-permanence risk analysis.
Round 2 Response from Client (23 August 2013)	Now clarified in 9.3.5
ESI Findings - Round 3 (31 October 2013)	Section 9.3.5 of FCOP has been revised to include a clear reference to the need to use the latest VCS AFOLU Non-Permanence Risk Tool as well as how this is related to the BC Emission Offset Regulation requirement to prepare a risk mitigation and contingency plan. This item is addressed.

Item No.	63
VCS Methodology Approval Process Version 3.5 (08 October 2013)	2) The methodology developer shall state whether, and explain how, the proposed methodology uses, includes, refers to or relies upon all or part of any of the listed methodologies. Where it does, the methodology developer shall demonstrate that none of the identified methodologies ("similar methodologies") could have been reasonably revised (i.e., developed as a methodology revision) to meet the objective of the proposed methodology. The onus is upon the methodology developer to demonstrate that a methodology revision would not have been more appropriate, failing which the proposed methodology shall not receive a positive assessment from the validation/verification body. Examples that sufficiently demonstrate the requirement for a new methodology include, but are not limited to, the following:
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Page 2 "Relationship to Approved or Pending Methodologies"
ESI Findings - Round 1 (18 April 2012)	Unclear if FCOP relies upon part of any of the listed VCS-approved methodologies.
Round 1 NCR/CL/OFI (23 April 2012)	Please clarify if FCOP relies upon part of any of the listed VCS-approved methodologies. If so, please sufficiently demonstrate the need for the new methodology in accordance with the VCS Methodology Approval Process Section 5.2.
Round 1 Response from Client (18 April 2012)	Clarified on page 2
ESI Findings - Round 2 (23 April 2013)	Page 2 now states :"At the time of writing, there are also several AFOLU Methodologies under development in the VCS program. However, none of the approved Methodologies or the methodologies under development allow for multiple forest and carbon management activities as part of a single project. Furthermore, there are no other AFOLU methodologies that have been developed to meet the requirements of the BC Emission Offsets Regulation." Finding is addressed.

Item No.	64
VCS Approved Methodology Template v3.3	1 SOURCES Indicate key documents, methodologies and/or projects upon which the proposed methodology /revision is based. Also identify any modules or tools to which the methodology/revision refers. Include information on author of methodology/revision, if desired.
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Section 1
ESI Findings - Round 1 (18 April 2012)	This includes a stakeholder comments section here but this is not the appropriate section.

Round 1 NCR/CL/OFI (23 April 2012)	Please remove the stakeholder comments from this section as it does not appear to be in the appropriate location.
Round 1 Response from Client (18 April 2012)	Done
ESI Findings - Round 2 (23 April 2013)	Has been removed from Section 1.3. Addressed

Item No.	65
VCS Approved Methodology Template v3.3	2 SUMMARY DESCRIPTION OF THE <METHODOLOGY>/<METHODOLOGY REVISION> Provide a brief summary description of the methodology/revision, including the main methodological steps. Indicate in the table below whether the methodology uses a project, performance or activity method for determining additionality, and a project or performance method for determining the crediting baseline (see the VCS Standard for further information on these methods).
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Section 2
ESI Findings - Round 1 (18 April 2012)	Please provide the main methodological steps in this section. Please indicate here whether the methodology is a project, performance, or activity method for determining additionality, and a project or performance method for determining the crediting baseline.

Additionally, this section includes information that is not appropriate for inclusion here (list of Federal and BC legal requirements and incentives). As discussed verbally, is the methodology targeted for more than just the BC jurisdiction or are the geographic bounds limited to BC? |
| **Round 1 NCR/CL/OFI (23 April 2012)** | Please provide the main methodological steps in this section. Please indicate here whether the methodology is a project, performance, or activity method for determining additionality, and a project or performance method for determining the crediting baseline.

This section includes information that is not appropriate for inclusion here (list of Federal and BC legal requirements and incentives). Please remove.

Though the methodology clearly states that it is applicable to only British Columbia, in verbal discussions it appeared that the methodology developer wanted to target a larger footprint. Please clarify. |
| **Round 1 Response from Client (18 April 2012)** | The list of legal requirements has been removed. An introductory section laying out the background and basic steps of the methodology has been added. The limitation of the applicability of the methodology to projects taking place within BC has been clarified in the applicability criteria. |
| **ESI Findings - Round 2 (23 April 2013)** | Section 2 now shows that the Project method will be used for both, and it has omitted much of the onerous info. Applicability limits to BC in Section 4.1. Addressed. |

Item No.	66
VCS Approved Methodology Template v3.3	3 DEFINITIONS Provide definitions of key terms and acronyms that are used in the methodology/revision.
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Section 3
ESI Findings - Round 1 (18 April 2012)	Definitions to not appear to be the same as those provided in the "VCS program definitions V3.2" (e.g. "Carbon Pool", "Dead Wood", etc.). Additionally, as the definitions section in appendix is a duplicate of that in section 2, please remove appendix a.
Round 1 NCR/CL/OFI (23 April 2012)	Definitions do not appear to be the same as those provided in the "VCS program definitions V3.2" (e.g. "Carbon Pool", "Dead Wood", etc.). Please address. Additionally, as the definitions section in appendix is a duplicate of that in section 2, please remove appendix a.
Round 1 Response from Client (18 April 2012)	Appendix A has been removed. Most of the definitions are or have been brought into consistency with VCS definitions, but note some that are not, such as "carbon pool", where the FCOP definition includes but is not limited to the meaning of the VCS definition. Because of the inclusion of HWP as a pool in more recent thinking, we are reluctant to use the VCS definition, which appears inconsistent with VCS practice.
ESI Findings - Round 2 (23 April 2013)	See GTC tab.
Round 2 NCR/CL/OFI (10 June 2013)	Please provide any guidance you have received from VCS on this issue.
Round 2 Response from Client (23 August 2013)	Meeting Notes
ESI Findings - Round 3 (31 October 2013)	No Meeting notes or guidance from VCS was provided.
Round 3 NCR/CL/OFI (01 November 2013)	CL: Please provide any guidance you have received from VCS on this issue.
Round 3 Response from Client (17 January 2014)	We reviewed our meeting notes in which this issue was discussed, and unfortunately do not find specific notes on this question. We suggest that you might wish to review this issue with VCS. We would be happy to participate in such a discussion.

ESI Findings - Round 4 (14 February 2014)	The Assessor reviewed each of FCOP's definitions side-by-side with VCS' "Program Definitions" v3.5 document. There was inconsistency in "pool", but the FCOP definition is not contradictory to VCS and is in line with ISO. "Crediting Period" is also not consistent, but does not appear to conflict, although the VCS definition is more specific. "Dead wood" is consistent and stringently defines the host country diameter at 10cm. Ex ante and ex post are not very explicit as to their meaning for the purpose of a carbon project. Also, "forest land" includes a definition that has the potential to contradict a project in FCOP. The "Project Plan" definition allows use of a template specified by the relevant GHG program, which is also stated in the VCS definition of Project Description; however, for the purposes of a VCS forest carbon project, the VCS template is required. REDD omits the VCS "and/or reduce the degradation of forest land where forest biomass is lost," which may not consistent.
Round 4 NCR/CL/OFI (18 February 2014)	NCR: Please consider making the FCOP definition of "crediting period" align with the VCS definition. Please more clearly define *ante* and *ex post*. Before and after the "fact" are not very explicit as to what they refer to for purposes of the methodology. Please remove the second half of the "Forest Land" definition "Forest land may include areas which are temporarily unstocked as result of human action, but have been stocked in the recent past." This has the potential to contradict the actions of a carbon project, specifically when ARR projects must not be forested any sooner than 20 years prior to start date. As the VCS Project Description is required for forest carbon projects, please revise the definition of "Project Plan" to require use of the VCS "Project Description" template only. The definition of "REDD" omits the VCS language "and/or reduce the degradation of forest land where forest biomass is lost" to define degradation. Although this was briefly mentioned in another response, please clarify why this was omitted.
Round 4 Response from Client (05 May 2014)	1) Definition of crediting period has been changed to match the definition contained in VCS Program Definitions V3.5 2) Definition of ex-ante and ex-post has been changed to make them more explicate. 3) The definition of Forest Land has been clarified using language found in the CDM definition of Forest (see the Glossary: CDM Terms, V07.0) 4) Definition has been changed to require the use of the VCS Project Description Template 5) Within the legal context of forestry in British Columbia, any projects addressing activities which "reduce the degradation of forest land where forest biomass is lost" would be covered under IFM. We therefore prefer not to introduce confusion with regard to project types in a BC context by including the degradation element in REDD.

ESI Findings - Round 5 (20 May 2014)	1) The definition for "Crediting Period" now appropriately matches the VCS definitions per VCS Definitions v3.5. 2)"Ex-ante" and "ex-post" explicitly and appropriately refer to analysis or quantification of future and past events or conditions. 3) The definition of "Forestland" clearly denotes stocking situations as a result of anthropogenic activities and encompasses ARR project types, the CDM definition is an appropriate source of the new language. 4) The "VCS Project Description Template" is now appropriately required. 5) The verifier accepts the methodology developer's assertion that "degradation and biomass lost" be omitted from the REDD definition due to the pre-existing legal situation in BC. The current definition is sufficient to capture project types in BC exclusively under IFM. This item is addressed.

Item No.	67
General/Technical Comments	Please see the specific finding and NCR/CL/OFI.
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	General
ESI Findings - Round 1 (18 April 2012)	This methodology includes a description of processes by which the PCT made decisions about aspects required, e.g. relevant carbon pools and baseline approach. These processes should not be included in a methodology. Many of my comments below reflect this.
Round 1 NCR/CL/OFI (23 April 2012)	This methodology includes a description of processes by which the PCT made decisions about aspects required, e.g. relevant carbon pools and baseline approach. These processes should not be included in a methodology, as a methodology is a specific, step-by-step guideline for a project to follow to ensure compliance with the VCS program. Many of the comments below reflect this.
Round 1 Response from Client (18 April 2012)	These sections have been removed.
ESI Findings - Round 2 (23 April 2013)	As the sections were removed, this item is addressed.

Item No.	68
General/Technical Comments	Please see the specific finding and NCR/CL/OFI.
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	General

ESI Findings - Round 1 (18 April 2012)	Throughout the methodology the use of "eligible project types" is used. VCS does not use this terminology. It uses the terms eligible project categories or eligible activities.
Round 1 NCR/CL/OFI (23 April 2012)	Throughout the methodology the instance of "eligible project types" is used, which is inconsistent with VCS, which uses the terms eligible project categories or eligible activities. Please revise and ensure consistency throughout the document.
Round 1 Response from Client (18 April 2012)	done
ESI Findings - Round 2 (23 April 2013)	None
Round 2 NCR/CL/OFI (10 June 2013)	Please revise the title of "Figure 1 Project and Baseline Model – All Eligible Project Types" to also be consistent.
Round 2 Response from Client (23 August 2013)	word changed to "categories"
ESI Findings - Round 3 (31 October 2013)	Figure 1 Title has been changed. This is addressed.

Item No.	69
General/Technical Comments	Please see the specific finding and NCR/CL/OFI.
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Section 2.3; Section 5.4.2.1
ESI Findings - Round 1 (18 April 2012)	Section 2.3 #3 and section 5.4.2.1 uses a verification term "materiality threshold" to define significance for exclusion of carbon pools. This is not consistent with the VCS AFOLU requirements. #3 allows for ignoring the relevant carbon pools in Table 2. #3 and #4 - use of the term carbon pool is not used as defined in this methodology or the VCS definitions. #4 makes a statement that this protocol does not prescribe on specific approach for quantifying forest carbon.
Round 1 NCR/CL/OFI (23 April 2012)	Section 2.3 #3 and Section 5.4.2.1 use a verification term "materiality threshold" to define significance for exclusion of carbon pools. This is not consistent with the VCS AFOLU requirements. Please revise. Section 2.3 #3 allows for ignoring relevant carbon pools in Table 2. Please clarify. Section 2.3 #'s 3 & 4 use the term "carbon pool" inconsistently with the VCS definitions. Please revise. Section 2.3 #4 makes a statement that this protocol does not prescribe on specific approach for quantifying forest carbon, which is a specific requirement of VCS. Please address.

Round 1 Response from Client (18 April 2012)	"materiality threshold" removed. De minimis criteria for 2.3 #3 appear clear. The issue with the use of "carbon pool" is unclear. 2.3 #4 has been redrafted to make it clear that standards are given for quantification of carbon pools.
ESI Findings - Round 2 (23 April 2013)	None
Round 2 NCR/CL/OFI (10 June 2013)	Pending definitions guidance.
Round 2 Response from Client (23 August 2013)	Note that the word "pool" is used consistently in the VCS AFOLU Guidance, and has been chosen as the preferred term on that basis.
ESI Findings - Round 3 (31 October 2013)	None
Round 3 NCR/CL/OFI (01 November 2013)	CL: The term Carbon Pool is provided in VCS Program Definitions. However, FCOP still uses a different definition. Please address.
Round 3 Response from Client (17 January 2014)	As noted in #136 above, The current VCS definition of carbon pools appears inconsistent with VCS practice. For instance, HWP would appear to meet the first part of the definition (reservoirs having the capacity to gain or lose carbon over time), but are not included in the second. This definition is also inconsistent with Table 2 of the AFOLU Requirements, which specifically includes wood products as a pool. Note also that the VCS definition defines a pool as "a reservoir", which in most usage, including that suggested by your team, is circular. Note also that ur definition is in essence taken directly from ISO 14064. We therefore continue to believe that this issue should properly be addressed with the VCS, and that our definition is more complete and correct.
ESI Findings - Round 4 (14 February 2014)	As noted in #136, the Assessor reviewed each of FCOP's definitions side-by-side with VCS' "Program Definitions" v3.5 document. There was inconsistency in "pool", but the FCOP definition is not contradictory to VCS and is in line with ISO. "Crediting Period" is also not consistent, but does not appear to conflict, although the VCS definition is more specific. "Dead wood" is consistent and stringently defines the host country diameter at 10cm. This item can now be considered addressed.

Item No.	70
General/Technical Comments	Please see the specific finding and NCR/CL/OFI.
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Section 3
ESI Findings - Round 1 (18 April 2012)	The definition of carbon pool in the methodology is inclusive of sinks and sources, but these terms are used in ways that create ambiguity throughout the methodology.

Round 1 NCR/CL/OFI (23 April 2012)	The definition of carbon pool in the methodology is inclusive of sinks and sources, but these terms are used in ways that create ambiguity throughout the methodology. Please clarify and ensure consistency throughout FCOP.
Round 1 Response from Client (18 April 2012)	None
ESI Findings - Round 2 (23 April 2013)	None
Round 2 NCR/CL/OFI (10 June 2013)	Pending definitions guidance.
Round 2 Response from Client (23 August 2013)	Pool as above. I think that the use of these three terms - sources and sinks describing essentially processes, and pools describing types of carbon stores - is common. See for instance AFOLU Guidance 4.7.1, which uses the three terms together just as they are used in this methodology.
ESI Findings - Round 3 (31 October 2013)	None
Round 3 NCR/CL/OFI (01 November 2013)	CL: The term Carbon Pool is provided in VCS Program Definitions. However, FCOP still uses a different definition. Please address.
Round 3 Response from Client (17 January 2014)	See response to #155 above
ESI Findings - Round 4 (14 February 2014)	As noted in #136, the Assessor reviewed each of FCOP's definitions side-by-side with VCS' "Program Definitions" v3.5 document. There was inconsistency in "pool", but the FCOP definition is not contradictory to VCS and is in line with ISO. "Crediting Period" is also not consistent, but does not appear to conflict, although the VCS definition is more specific. "Dead wood" is consistent and stringently defines the host country diameter at 10cm. This item can now be considered addressed.

Item No.	71
General/Technical Comments	Please see the specific finding and NCR/CL/OFI.
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Section 5.1
ESI Findings - Round 1 (18 April 2012)	Section 5.1 Project Boundary states that BC EOR must be followed to identify the geographic boundary but does not list the requirements. All requirements should be listed.
Round 1 NCR/CL/OFI (23 April 2012)	Section 5.1 Project Boundary states that BC EOR must be followed to identify the geographic boundary but does not list the requirements. All requirements should be listed. Please revise.

Round 1 Response from Client (18 April 2012)	Not sure that this is a correct interpretation of VCS guidance. If all relevant sections of applicable methods, rules and legislation were included in methodologies, they'd get awfully long.
ESI Findings - Round 2 (23 April 2013)	None
Round 2 NCR/CL/OFI (10 June 2013)	Is there a way for FCOP to summarize the over-arching boundary requirements from the BC EOR or point to a specific section of the BC EOR?
Round 2 Response from Client (23 August 2013)	The first reference to the BC EOR, in 5.1 para 1, points to a specific clause in the EOR. Text has been added to the second reference to the BC EOR to also point to section of that document.
ESI Findings - Round 3 (31 October 2013)	The Methodology added clarifying text. This, this should be considered addressed.

Item No.	72
General/Technical Comments	Please see the specific finding and NCR/CL/OFI.
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Section 3
ESI Findings - Round 1 (18 April 2012)	let's save time and ask generally that they include and adhere to all VCS required definitions
Round 1 NCR/CL/OFI (23 April 2012)	The Definitions (Section 3) do not appear to include much of the technical terminology specific to FCOP. In addition, it appears some of the definitions are inconsistent with VCS definitions outlined in its program documents. Please include a more robust set of definitions for FCOP and ensure they are in accordance with VCS definitions.
Round 1 Response from Client (18 April 2012)	Awaiting updates on definitions
ESI Findings - Round 2 (23 April 2013)	None
Round 2 NCR/CL/OFI (10 June 2013)	Pending.
Round 2 Response from Client (23 August 2013)	A number of definitions have been either added or updated to be consistent with VCS definitions. In some cases, the definitions also include language from the BC EOR.
ESI Findings - Round 3 (31 October 2013)	None

Round 3 NCR/CL/OFI (01 November 2013)	CL: It appears that several Methodology definitions are different from those found in VCS Program Definitions. Please provide any guidance you have received from VCS on this issue.
Round 3 Response from Client (17 January 2014)	As discussed above, in these cases we have not been able to find specific records in our meeting notes. However, we have reviewed all definitions, and brought them as closely into alignment with VCS as possible, respecting BC regulation, with the following notes: 1) Carbon pool - discussed in #155 above. 2) Forest land- completely consistent with VCS definition, but provides additional country specific criteria. 3) REDD - for FCOP purposes, we have eliminated the degradation portion of the REDD definition, as this could lead to material confusion in a BC setting, where REDD includes only APD, and where any "degradation" falls within the IFM categories.
ESI Findings - Round 4 (14 February 2014)	Refer to Item #136. There is still uncertainty about the use of some of these definitions.
Round 4 NCR/CL/OFI (18 February 2014)	Pending Item #136.
Round 4 Response from Client (05 May 2014)	See item 136. We believe that we have addressed all of the definitional issues raised.
ESI Findings - Round 5 (20 May 2014)	This finding has been addressed in Section 3: Definitions of the VCS Methodology Template. Finding closed.

Item No.	73
General/Technical Comments	Please see the specific finding and NCR/CL/OFI.
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Section 7.1; Page 77, First bullet
ESI Findings - Round 1 (18 April 2012)	For additionality, a non-financial barrier is the [project involving technologies/approaches with which the project proponent is not comfortable or experienced.
Round 1 NCR/CL/OFI (23 April 2012)	For additionality, a non-financial barrier is "the project involving technologies/approaches with which the project proponent is not comfortable or experienced." This is not an acceptable allowance to determine additionality, as it is too broad, and many of the technologies associated with carbon projects are new and unfamiliar to project developers already. Please address.
Round 1 Response from Client (18 April 2012)	Additionality assessment now uses a tool approved by the VCS.
ESI Findings - Round 2 (23 April 2013)	None

Round 2 NCR/CL/OFI (10 June 2013)	The methodology assessor believes the revised language "which are new to the project proponent" still contains the same causes of concern as the original language. It is too broad. Please address.
Round 2 Response from Client (23 August 2013)	This bullet has been removed.
ESI Findings - Round 3 (31 October 2013)	This is now found in Section 7.2 of the revised methodology. The second bullet has been removed. This item is addressed.

Item No.	74
General/Technical Comments	Please see the specific finding and NCR/CL/OFI.
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Section 10.1
ESI Findings - Round 1 (18 April 2012)	The methodology incorporates some aspects that for the VCS fall into a program-level requirement. For example, the methodology has established a pathway for how projects shall remedy an over-issuance or a reversal (e.g. setting aside funds in a contingency account, purchasing insurance to protect against having to replace credits after a reversal event, etc.). For the VCS this and similar issues are a program-level requirement which is set out in the VCS program documents, not in a methodology. Items like this cannot be approved into the methodology. Please remove this and review the methodology to ensure similar items do not exist.
Round 1 NCR/CL/OFI (23 April 2012)	NOT ASKED
Round 1 Response from Client (18 April 2012)	None
ESI Findings - Round 2 (23 April 2013)	None
Round 2 NCR/CL/OFI (10 June 2013)	The methodology incorporates some aspects that for the VCS fall into a program-level requirement. For example, the methodology has established a pathway for how projects shall remedy an over-issuance or a reversal (e.g. setting aside funds in a contingency account, purchasing insurance to protect against having to replace credits after a reversal event, etc.). For the VCS this and similar issues are a program-level requirement which is set out in the VCS program documents, not in a methodology. Items like this cannot be approved into the methodology. Please remove this and review the methodology to ensure similar items do not exist.
Round 2 Response from Client (23 August 2013)	The problem appeared to be limited to section 9.3.5. The section has received significant redrafting to refocus it on the risk mitigation and contingency planning required by the BC EOR, and to eliminate overlap with the VCS risk assessment and buffering mechanisms.

ESI Findings - Round 3 (31 October 2013)	Section 9.3.5 removed contingency planning language. This is addressed.

Item No.	75
General/Technical Comments	Please see the specific finding and NCR/CL/OFI.
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Section 6.1.2
ESI Findings - Round 1 (18 April 2012)	Under the VCS AFOLU Requirements V3.2 it specifies that for IFM and REDD project types the project proponents for the duration of the project will reassess the baseline every 10 years. For ARR the baseline cannot be revised. However in section 6.1.2 of the methodology it appears to indicate that the baseline (or elements of the baseline) can be adjusted dynamically during the project period. This is not consistent with the VCS requirements. Please revise.
Round 1 NCR/CL/OFI (23 April 2012)	NOT ASKED
Round 1 Response from Client (18 April 2012)	None
ESI Findings - Round 2 (23 April 2013)	None
Round 2 NCR/CL/OFI (10 June 2013)	Under the VCS AFOLU Requirements V3.2 it specifies that for IFM and REDD project types the project proponents for the duration of the project will reassess the baseline every 10 years. For ARR the baseline cannot be revised. However in section 6.1.2 of the methodology it appears to indicate that the baseline (or elements of the baseline) can be adjusted dynamically during the project period. This is not consistent with the VCS requirements. Please revise.
Round 2 Response from Client (23 August 2013)	Section 6.1.2 has been removed from the methodology, and guidance language added to section 6.0 to ensure compliance with VCS requirements.
ESI Findings - Round 3 (31 October 2013)	Section 6.0 of the revised methodology now includes correct reassessment requirements for the baselines in REDD, IFM, and ARR project. This is addressed.

Item No.	76
General/Technical Comments	Please see the specific finding and NCR/CL/OFI.
Evidence Used to Assess (Location in PD/MR or Supporting	All

Documents)	
ESI Findings - Round 1 (18 April 2012)	Guidance issued by VCS on 08 October 2013 stated that "shall" should not be used in methodologies, but its usage should be reserved for VCS.
Round 1 NCR/CL/OFI (23 April 2012)	None
Round 1 Response from Client (18 April 2012)	None
ESI Findings - Round 2 (23 April 2013)	None
Round 2 NCR/CL/OFI (10 June 2013)	None
Round 2 Response from Client (23 August 2013)	None
ESI Findings - Round 3 (31 October 2013)	None
Round 3 NCR/CL/OFI (01 November 2013)	NCR: Based on 08 October 2013 guidance issued by VCS (see Section 5.2 of the VCS Guidance "Validation and Verification Manual" http://www.v-c-s.org/sites/v-c-s.org/files/VCS%20Validation%20Verification%20Manual%2C%20v3.1_1.pdf), the use of the word "shall" is reserved for VCS. Please change the word "shall" to "must", "should", or "may" where applicable. The assessor noted the use of "shall" 55 times in a search of the document.
Round 3 Response from Client (17 January 2014)	All uses of the term "shall" have been reviewed and changed to the appropriate term.

ESI Findings - Round 4 (14 February 2014)	There are two additional usages of the word "shall" in Section 7.1.2 of FCOP. Additionally, Section 8.3.1.1, #2&4 uses "shall" again. Please address. There is frequent usage of "should" throughout FCOPO. Examples are noted in Section 8.0, Section 8.1.1.1.1, Section 8.1.2.8, Section 8.2 and Section 8.3.1.2.3. The assessor noted its use 74 times in FCOP. Please confirm that all instances of "should" which remain in FCOP are intentional and consistent with the VCS Validation Verification Munal which states "should is to be used to indicate a (non-mandatory) recommendation". Please discuss or address. The first paragraph of Section 7.2 uses "may be" in discussing additionality. This does not appear consistent with the Verification manual which states "may is to be used to indicate a permissible or allowable option" where other options exist. Please discuss the context of "may" here. Section 8.1.2.4, 8.1.2.5, and 8.1.2.6, "Determining the emission factor" has the usage of "may be" in relation to determining emission factors. This must be prescriptive and definitive. Section 8.3.1.2.2.1 uses "may be" for an equation, and no other alternative is given. Please discuss or address. Section 9.3.4 states "some variables may be subject to monitoring." This topic is leakage monitoring, which is a very large component and area of risk for project emissions. Please discuss or address. Section 5.1 states that projects "Such evidence could include". This should be more prescriptive or specific, as this could be an area where project developers "game" the system. Please discuss or address.
Round 4 NCR/CL/OFI (18 February 2014)	NCR: Please see the "Findings" for all additional locations and instances of terminology that should be revised in FCOP. Please ensure FCOP contains fully prescriptive requirements, does not allow room for self-interpretation, and closes any gaps where potential gaming could occur by Project Developers.

Round 4 Response from Client (05 May 2014)	1) all uses of "shall" have been addressed. 2) all uses of the word "should" have been reviewed, and the word has been changed to "must" where appropriate. 3) The wording "may be" has been withdrawn from section 7.2., and all uses of "may be" have been reviewed, and changed where appropriate. 4) The use of "may be" in sections 8.1.2.4, 8.1.2.5. and 8.1.2.6 has been changed to must, 5) The use of "may be" in section 8.3.1.2.2.1 has been changed to must 6) As noted in the section, the use of "may be" is appropriate here, because it will depend on what leakage calculation method is used to estimate leakage in the ex-ante assessment. We believe that variables which will require monitoring have been correctly and prescriptively identified in the leakage section. 7) Please note that the preceding sentence in section 5.1 states that the proponent "must also provide evidence", which we believe establishes the requirement. The reason that "could include" is used in the following sentence is that we believe that a) other forms of proof could be available (i.e. history of forest management), and b) in some cases one of these types of evidence alone might not be sufficient – in other words, we are giving the methodology assessor room to make a judgement as to whether or not the evidence presented is sufficient, which would not be the case if we made this prescriptive (see the history around registration under the Private Managed Forest Lands Act in the BC Auditor General's report). In any case, given the specificity of land use regulation and private land zoning in BC, this issue is extremely unlikely to be contentious or "gamed".
ESI Findings - Round 5 (20 May 2014)	1. The verifier performed a global search for "shall" and all instances have been changed to "must". 2. The verifier reviewed instances of the words "should" and "must" for their relevance to the context. In general, usage of these terms is adequate and appropriate. 3-5. Instances of the words "may be" were reviewed and are generally used in the correct context, situations where "may be" was used in the wrong context were correctly changed to "must be" 6. Verifiers agree with methodology developers assertion that "may be" is correct here because of the choices given to project proponents for leakage calculation 7. Verifiers agree with the assertion by methodology developers that the wording could be mis-construed. Indeed it is the role of the auditing body to make a judgement call on whether evidence is sufficient. This finding is closed.

Item Number	77
VCS AFOLU Requirements Version 3.4 (ARR) (08 October 2013)	7) Buffer credits are withheld only when GHG credits are issued. As set out in Section 4.7.2, the number of buffer credits to withhold is based on the change in carbon stocks only (not the net GHG benefit), as such the buffer credits will be based on the long-term average change in carbon stock. Use the following equation to calculate the long-term average change in carbon stock.
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Section 8.1.1.1.5

ESI Findings - Round 1 (18 April 2012)	The language in VCS is again unclear on this but I presume the logic is similar to what I describe above. The number of buffer credits to withhold in FCOP is not based on the long term average change in carbon stock the way it is described in the AFOLU. Instead section 10 simply says that a portion of generated credits in each reporting period must be set aside in a project specific buffer pool. FCOP is very weak in this regard and "relies on a robust legislative framework (through the BC Emission Offset Regulation and the Greenhouse Gas Reductions Targets Act) to hold project developers accountable for managing the risks of any reversals occurring". In section 8.1.1.4 FCOP has some generalities about how to quantify reversals (whether or not the baseline is modelled after an event and how foreshortened storage times should be addressed) but does not provide detail on the number of credits to withhold.
Round 1 NCR/CL/OFI (23 April 2012)	None
Round 1 Response from Client (18 April 2012)	None
ESI Findings - Round 2 (23 April 2013)	How buffer credits are withheld is not specifically addressed in the protocol and there is no reference to their determination being relative to the long term average change in carbon stocks (rather than GHG benefits) although section 8 is generally about quantifying GHG emissions and section 9.3.5 list some possible ways of mitigating reversals, including setting aside a portion of generated credits in each reporting period in a project-specific buffer pool. Please address.
Round 2 NCR/CL/OFI (10 June 2013)	NCR: Please address the finding.
Round 2 Response from Client (23 August 2013)	How buffer credits are withheld is not specifically addressed in the protocol and there is no reference to their determination being relative to the long term average change in carbon stocks (rather than GHG benefits) although section 8 is generally about quantifying GHG emissions and section 9.3.5 list some possible ways of mitigating reversals, including setting aside a portion of generated credits in each reporting period in a project-specific buffer pool.
ESI Findings - Round 3 (31 October 2013)	Their comment is correct that this is programmatic and in conflict with # 175. Addressed.

Item Number	78
VCS AFOLU Requirements Version 3.4 (ARR) (08 October 2013)	4.6.8 Activity-shifting leakage in ARR projects can result from, inter alia, the shifting of grazing animals, shifting of households or communities, shifting of aquacultural or agricultural activities or shifting of fuelwood collection (from non-tree sources). Leakage emissions may also result from transportation and machinery use. The requirements for assessing and managing leakage in ARR projects are similar to those for CDM afforestation/reforestation project activities, and such projects may apply CDM tools for estimating leakage, such as the Tool for calculation of GHG emissions due to leakage from increased use of non-renewable woody biomass attributable to an A/R CDM project activity.
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Section 8.3

ESI Findings - Round 1 (18 April 2012)	Section 8.3 of FCOP describes land use shifting leakage and harvest shifting leakage (both internal and external) for affected carbon pools. The approach used in FCOP focuses on assessing the change in key project and baseline activity levels that are under the control of the project proponent, namely harvesting levels and amount of land-use conversion, and then using this change in activity to estimate the reduced removals that would be associated with project activities but that occur at locations outside the project boundary. The approach is complex and considers price and demand elasticity factors for all of North America. It does not refer to any of the CDM tools for estimating leakage. It is another area of significant departure from VCS although it is not clear that it is not an eligible approach under VCS.
Round 1 NCR/CL/OFI (23 April 2012)	None
Round 1 Response from Client (18 April 2012)	None
ESI Findings - Round 2 (23 April 2013)	None
Round 2 NCR/CL/OFI (10 June 2013)	NCR: Methodology section 8.3.1, equation 36 (and throughout the remaining 8.3 Sections) uses the term Activity Shifting leakage in ways specific to this methodology that need clarification in this section of the methodology and in the Definitions Section of the methodology, i.e., the use the term Activity shifting Leakage is divided into land use and harvest shifting activities, and well as further divided into internal and external leakage. Please ensure that these terms are fully defined.

Table 12 in Methodology Section 8.3.1 includes only Activity Shifting Leakage. Please include Market leakage in this table, and provide criteria and procedures in Section 8.3 of the methodology (such as how Activity Shifting leakage was handled).

Methodology Section 8.3.1.2.5 states "Based on the above assessments of internal and external harvest shifting leakage, GHGCO2, Harvest Shifting, t from Equation 35 would be calculated using one of the following two approaches. " The two approaches referred to in this statement are missing from the methodology. |
Round 2 Response from Client (23 August 2013)	These points have been addressed as part of rewriting the methodology to use standard VCS leakage type definitions.
ESI Findings - Round 3 (31 October 2013)	Please use comments in the margins to point to where these NCRs have been addressed. The methodology assessor was not able to find these changes. See NCR 179 comments below - definitions are still an issue that has not been addressed.
Round 3 NCR/CL/OFI (01 November 2013)	CL: The Assessor requests that you please use comments in the margins to point to where these NCRs have been addressed. The methodology assessor was not able to find these changes. See NCR 179 comments below - definitions are still an issue that has not been addressed.
Round 3 Response from Client (17 January 2014)	In general the changes were not flagged, as the entirety of Section 8.3 had been substantially redrafted from the previous version. In reviewing in response to this NCR, we did find a couple of residual uses of old terminology, which have been removed. We have also added definitions of Activity Shifting and Market Leakage, based on the definitions given in the AFOLU Requirements, Section 4.6.1

ESI Findings - Round 4 (14 February 2014)	The term "Activity Shifting Leakage" has been defined in the "Definitions" Section 3 and in Section 8.3.1 to be consistent with VCS definitions. "Harvest shifting leakage" is now changed to "Market leakage" in FCOP (Section 8.3.1, second bullet) and is consistent with VCS definitions. Table 12 no longer contains information on leakage, as the entire document was re-written. 8.3.1.2 further addresses the steps to determine market leakage. There is an "Error! Reference source not found" note in second paragraph of Section 8.3.1.2. All leakage equations appear to be listed, but Equation 33 appears to be labelled as Equation 3 in Section 8.3.1.2.2.1.
Round 4 NCR/CL/OFI (18 February 2014)	NCR: Please correct the "Error! Reference source not found" note in second paragraph of Section 8.3.1.2. Please correct the label for Equation 33 (currently states "Equation 3").
Round 4 Response from Client (05 May 2014)	"Error! Reference source not found" notations have been replaced with correct references where-ever found. Note that correcting this problem required changes to equations 3 and 4.
ESI Findings - Round 5 (20 May 2014)	The "Error! Reference source not found" have been appropriately fixed where found. The leakage values (i.e. Northern Interior British Columbia Base Case) are derived in Appendix E. The response by the methodology developer appears to be misplaced, but the described emissions sources are sufficiently defined in the FCOP. This item is addressed.

Item Number	79
VCS AFOLU Requirements Version 3.4 (ARR) (08 October 2013)	4.6.9 Where deforestation increases outside the project area due to leakage from project activities, the effects of this deforestation on all carbon pools shall be assessed and quantified, unless determined to be de minimis (as set out in Section 4.3.3) or conservatively excluded (as set out in Section 4.3.4).
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Section 8.3
ESI Findings - Round 1 (18 April 2012)	I think FCOP is consistent with this requirement.
Round 1 NCR/CL/OFI (23 April 2012)	None
Round 1 Response from Client (18 April 2012)	None
ESI Findings - Round 2 (23 April 2013)	see internal comments

Round 2 NCR/CL/OFI (10 June 2013)	NCR - Methodology Section 8.3 states: " Where total leakage from all sources is found to be de minimis, leakage does not need to be included in the GHG emissions accounting". The methodology assessor could not find how de minimis leakage is calculated. Please provide criteria and procedures for how de minimis leakage is determined.
Round 2 Response from Client (23 August 2013)	Methodology Section 8.3 states: " Where total leakage from all sources is found to be *de minimis*, leakage does not need to be included in the GHG emissions accounting". The assessor could not find how de minimis leakage is calculated.
ESI Findings - Round 3 (31 October 2013)	NCR: Please provide criteria and procedures for how *de minimis* leakage is determined.
Round 3 NCR/CL/OFI (01 November 2013)	Language added to 8.3.1 to address this issue.
Round 3 Response from Client (17 January 2014)	None
ESI Findings - Round 4 (14 February 2014)	None

| Round 4 NCR/CL/OFI (18 February 2014) | NCR: Section 8.3 was re-written, but it is difficult to follow. The first four paragraphs of Section 8.3 add little to no value to FCOP and seem to confuse the use of the term leakage. The use of "goods and services" is not consistent with how VCS defines leakage. The terms "negative and positive leakage" are not used by VCS and do not add clarity in this methodology. The term "total leakage" is not used in any requirements, so it is unclear why it is mentioned in FCOP. The term "de minimis" does not refer to leakage but to carbon pools that must be included in the baseline, and therefore monitored in the future. The assessor believes that the only types of leakage that should be used, 1) Activity Shifting, & 2) Market. These are defined in Section 4.6.1 of the AFOLU Requirements. The methodology states that "total leakage" is calculated in EQ 30 which refers to PP 10. PP 10 is not included in Table 2. PP 10 is found in Table 6 but in reference to "harvest activity shifting and land use shifting leakage". The terms "harvest shifting and land use shifting leakage" are ambiguous, are not VCS terms, and create ambiguity between Table 6 and Table 17. What is the difference in the use of "relevant" in Table 6 and "Potentially" in Table 17? What is the purpose of Table 17 if Table 6 is clear/concise?   The numbering system in Section 8.3 is not correct. In 8.3.1.1, the logic of determining the significance of activity shifting leakage is not clear (perhaps because the numbering is not correct). The use of if-then statements would help clarify this. The methodology assessor still does not see clearly how market leakage is calculated. This methodology still used the terms "external leakage" in EQ 31 and EQ 32. EQ 33 uses the term "harvest shifting leakage". It is unclear why there are two methods for calculating market leakage. Since Market leakage is leakage associated with an increase in production on other ownerships, the assessor does not see the applicability of Method 1.   The third paragraph of Section 8.3.1.2 Market Leakage explicitly states that NO activity shifting leakage and NO market leakage can occur. This statement is not consistent with previous requirements to assess the significance of leakage.

OFI: Perhaps, it might be useful to exclude activity shifting leakage from projects in the Applicability Conditions. Allowing the project proponent to choose which method to use to calculate market leakage has the potential for gaming the answer. It may make sense to require using both methods to calculate market leakage, then a justification of why one is more valid than the other. Alternatively, the method must tell the project proponent under what conditions each method must be used. In Section 8.3.1.2.1, the term "in-forest" harvesting impacts is used. Are not all harvesting impacts in the forest? The first 3 paragraphs of Section 8.3.1.2.3 appears to be out of place - they refer to using Method 2 below, when the description of Method 2 is above this section of the methodology. The numbering system continues to be off throughout Section 8.3 Leakage. Table 18 specifies looking up Provincial Leakage values without making reference to these. Please clarify if these have been peer-reviewed or approved for use in BC. Tables 19, 20, and 21 make recommendations on values to be used in EQs 34, 35, and 36 without providing references. Please clarify if these have been peer-reviewed. |
| Round 4 Response from Client (05 May 2014) | None |

ESI Findings - Round 5 (20 May 2014)	1) First four paragraphs of 8.3 have been removed. 2) Definitions of leakage types in section 8.3.1 have been made consistent with definitions in Section 3. 3) term "total leakage" has been removed. 4) the concept of "de minimis" has been retained for leakage, consistent with AFOLU Requirements Section 4.6.2. 5) PP10 had been mislabelled in Table 4 as PP8. This has now been renamed PE16, as it is properly an emission, not a pool, and has been redefined to be consistent with the definitions in Section 3. 6) Changes have been made to Table 6 to make it consistent with VCS. 7) Table 17 has been removed. 8) Section 8.3.1 .1 has been revised to increase clarity. 9) we don't find the term "external leakage" associated with Eq. 31 and 32. 10) the term "Harvest shifting leakage has been removed from Eq. 33 11) We cannot see how the third paragraph of 8.3.1.2. stated that no market or activity shifting leakage could occur. However, we have clarified this paragraph, and removed the fourth paragraph, which was not relevant for market leakage. 12) We have added text at the beginning of the Market Leakage section to explain the difference between the two methods. 13) The first two paragraphs of Section 8.3.1.2.3 have been removed - they were out of place, and duplicated information given elsewhere. 14) Provincial base case leakage values have been approved for use in BC - their derivation is given in Appendix A. 15) The references and derivations for the values given in Tables 19, 20 and 21 are found in Appendix A.
Round 5 NCR/CL/OFI (23 May 2014)	CL: Please address the findings.
Round 5 Response from Client (22 July 2014)	Per the Assessor's comment, the first four paragraphs (which were generally information and introductory) were removed from Section 8.3.

As mentioned above, leakage definitions in FCOP are now consistent with VCS definitions.

"Total" leakage, which appeared to be a general term for "leakage" has been removed.

The comment is correct that VCS allows the use of de minimis thresholds in determining leakage for a project. This comment is rescinded by the Assessor.

In accordance with the comment, Table 4 now contains only PE16, which has now been defined as an emission. However, the table is supposed to be for Pools, and Emissions are listed in the previous table. Table 6 appears to be corrected to remove reference to PP10.

Table 17 has been removed, as it appeared to be redundant. The revisions in Section 8.3.1.1 do increase clarity by removing redundancies and confusion. More steps have been added for better direction. All references to "external" leakage have been removed. Harvest Shifting Leakage has been clarified to be Market leakage.

In-forest impacts are still mentioned with no clear definition.

Footnote 64, 72 & 74 contain an "Error!.." message, as do the sentences above Tables 22 & 23.

Provincial base case (baseline?) leakage values are given in Appendix A; however, it is unclear where these are derived and if they are widely recognized as such across BC. |
| **ESI Findings - Round 6 (28 August 2014)** | None |
| **Round 6 NCR/CL/OFI (17 September 2014)** | CL: Please correct or clarify why Table 4 (a table describing relevant Pools) only contains one Emission (PE16). PE 16 should be listed in Table 2 or 3, should it not? |

Round 6 Response from Client (26 September 2014)	Table 4 refers to "affected" sinks, sources or pools, rather than "controlled" carbon pools (table 2), or "controlled and related" emission sources (Table 3)
ESI Findings - Round 7 (19 October 2014)	The "Error! Reference source not found" have been appropriately fixed where found. The leakage values (i.e. Northern Interior British Columbia Base Case) are derived in Appendix E. The response by the methodology developer appears to be misplaced, but the described emissions sources are sufficiently defined in the FCOP. This item is addressed.

Item Number	80
VCS AFOLU Requirements Version 3.4 (ARR) (08 October 2013)	4.6.9 Where deforestation increases outside the project area due to leakage from project activities, the effects of this deforestation on all carbon pools shall be assessed and quantified, unless determined to be de minimis (as set out in Section 4.3.3) or conservatively excluded (as set out in Section 4.3.4).
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	8.3.1.2.2.1
ESI Findings - Round 1 (18 April 2012)	None
Round 1 NCR/CL/OFI (23 April 2012)	None
Round 1 Response from Client (18 April 2012)	None
ESI Findings - Round 2 (23 April 2013)	None
Round 2 NCR/CL/OFI (10 June 2013)	None
Round 2 Response from Client (23 August 2013)	None
ESI Findings - Round 3 (31 October 2013)	None
Round 3 NCR/CL/OFI (01 November 2013)	None
Round 3 Response from Client (17 January 2014)	None

ESI Findings - Round 4 (14 February 2014)	None
Round 4 NCR/CL/OFI (18 February 2014)	None
Round 4 Response from Client (05 May 2014)	None
ESI Findings - Round 5 (20 May 2014)	None
Round 5 NCR/CL/OFI (23 May 2014)	None
Round 5 Response from Client (22 July 2014)	None
ESI Findings - Round 6 (28 August 2014)	None
Round 6 NCR/CL/OFI (17 September 2014)	CL: Section 8.3.1.2.2.1 still references "in-forest impacts," which do not appear to be defined in FCOP. Please define these somewhere for clarity.
Round 6 Response from Client (26 September 2014)	The term "in-forest" was unnecessary in light of the definitions given in the tables, and has been removed.
ESI Findings - Round 7 (19 October 2014)	The term "in-forest" was confirmed to have been removed. Item is addressed.

Item Number	81
VCS AFOLU Requirements Version 3.4 (ARR) (08 October 2013)	4.6.9 Where deforestation increases outside the project area due to leakage from project activities, the effects of this deforestation on all carbon pools shall be assessed and quantified, unless determined to be de minimis (as set out in Section 4.3.3) or conservatively excluded (as set out in Section 4.3.4).
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Footnotes 64, 72 & 74 and the sentences above Tables 22 & 23.
ESI Findings - Round 1 (18 April 2012)	None
Round 1 NCR/CL/OFI	None

(23 April 2012)	
Round 1 Response from Client (18 April 2012)	None
ESI Findings - Round 2 (23 April 2013)	None
Round 2 NCR/CL/OFI (10 June 2013)	None
Round 2 Response from Client (23 August 2013)	None
ESI Findings - Round 3 (31 October 2013)	None
Round 3 NCR/CL/OFI (01 November 2013)	None
Round 3 Response from Client (17 January 2014)	None
ESI Findings - Round 4 (14 February 2014)	None
Round 4 NCR/CL/OFI (18 February 2014)	None
Round 4 Response from Client (05 May 2014)	None
ESI Findings - Round 5 (20 May 2014)	None
Round 5 NCR/CL/OFI (23 May 2014)	None
Round 5 Response from Client (22 July 2014)	None
ESI Findings - Round 6 (28 August 2014)	None

Round 6 NCR/CL/OFI (17 September 2014)	NCR: Please correct the "Error!..." messages in Footnotes 64, 72 & 74 and the sentences above Tables 22 & 23.
Round 6 Response from Client (26 September 2014)	As noted above the "Error!" messages have been searched and corrected
ESI Findings - Round 7 (19 October 2014)	The "Error! Reference source not found" have been appropriately fixed, no existing errors could be found. The item is addressed.

Item Number	82
VCS AFOLU Requirements Version 3.4 (ARR) (08 October 2013)	4.6.9 Where deforestation increases outside the project area due to leakage from project activities, the effects of this deforestation on all carbon pools shall be assessed and quantified, unless determined to be de minimis (as set out in Section 4.3.3) or conservatively excluded (as set out in Section 4.3.4).
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Footnotes 64, 72 & 74 and the sentences above Tables 22 & 23.
ESI Findings - Round 1 (18 April 2012)	None
Round 1 NCR/CL/OFI (23 April 2012)	None
Round 1 Response from Client (18 April 2012)	None
ESI Findings - Round 2 (23 April 2013)	None
Round 2 NCR/CL/OFI (10 June 2013)	None
Round 2 Response from Client (23 August 2013)	None
ESI Findings - Round 3 (31 October 2013)	None
Round 3 NCR/CL/OFI (01 November 2013)	None

Round 3 Response from Client (17 January 2014)	None
ESI Findings - Round 4 (14 February 2014)	None
Round 4 NCR/CL/OFI (18 February 2014)	None
Round 4 Response from Client (05 May 2014)	None
ESI Findings - Round 5 (20 May 2014)	None
Round 5 NCR/CL/OFI (23 May 2014)	None
Round 5 Response from Client (22 July 2014)	None
ESI Findings - Round 6 (28 August 2014)	None
Round 6 NCR/CL/OFI (17 September 2014)	CL: Because of the Error! messages, it is unclear how leakage values given in Appendix A are derived and if they are widely recognized as such across BC. Please provide a website link to the referenced sources, preferably a government website showing these standardized values are recognized at the government level.
Round 6 Response from Client (26 September 2014)	Hopefully the confusion regarding the derivation of the leakage values has been resolved with the correction of the "Error!" references. As regards the source of the leakage calculations, they are contained in the original version of FCOP, housed on the Government of BC website at: http://www.env.gov.bc.ca/cas/mitigation/pdfs/Forest_Carbon_Offset_Protocol_v1_0_Web.pdf
ESI Findings - Round 7 (19 October 2014)	This link provided by methodology developers references the FCOP, of which the placement of PE-16 appears to be a legacy. As this is the only "affected" source it seems appropriate to distinguish it from the rest. The item is addressed.

Item Number	82
VCS AFOLU Requirements Version 3.4 (REDD) (08 October 2013)	4.2.5Eligible REDD activities are those that reduce net GHG emissions by reducing deforestation and/or degradation of forests. Deforestation is the direct, human-induced conversion of forest land to non-forest land. Degradation is the persistent reduction of canopy cover and/or carbon stocks in a forest due to human activities such as animal grazing, fuelwood extraction, timber removal or other such activities, but which does not result in the conversion of forest to non-forest land (which would be classified as deforestation), and qualifies as forests remaining as forests, such as set out under the IPCC 2003 Good Practice Guidance. The project area shall meet an internationally accepted definition of forest, such as those based on UNFCCC host-country thresholds or FAO definitions, and shall qualify as forest for a minimum of 10 years before the project start date. The definition of forest may include mature forests, secondary forests, and degraded forests. Under the VCS, secondary forests are considered to be forests that have been cleared and have recovered naturally and that are at least 10 years old and meet the lower bound of the forest threshold parameters at the start of the project. Forested wetlands, such as floodplain forests, peatland forests and mangrove forests, are also eligible provided they meet the forest definition requirements mentioned above.
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Section 4.1
ESI Findings - Round 1 (18 April 2012)	FCOP does not specifically reference IPCC 2003 in its definition of forest. In FCOP, to be eligible for REDD, project lands must meet the definition of Forest Land (25% crown closure and 5m tall at maturity) at project commencement. This is different than VCS, which requires a minimum of 10 years before the project start date. Secondary forest is not defined in FCOP.
Round 1 NCR/CL/OFI (23 April 2012)	None
Round 1 Response from Client (18 April 2012)	None
ESI Findings - Round 2 (23 April 2013)	FCOP does not specifically reference IPCC 2003 nor any internationally accepted definition of forest. In FCOP, to be eligible for REDD, project lands must meet the definition of Forest Land (25% crown closure and 5m tall at maturity) at project commencement. This is different than VCS, which requires, amongst other things, that a forest must qualify as a forest for a minimum of 10 years before the project start date. There is no such time constraint in FCOP.
Round 2 NCR/CL/OFI (10 June 2013)	NCR: Please address the finding.
Round 2 Response from Client (23 August 2013)	Specific criteria added to the applicability section

ESI Findings - Round 3 (31 October 2013)	The methodology references the definition for forest used by Canada for reporting under the United Nations Convention on Climate Change and specifically sets out a requirement that the project area must be a forest for a minimum of 10 years prior to project start date. This finding is addressed.

Item Number	83
VCS AFOLU Requirements Version 3.4 (REDD) (08 October 2013)	4.2.7 Activities covered under the REDD project category are those that are designed to stop planned (designated and sanctioned) deforestation or unplanned (unsanctioned) deforestation and/or degradation. Avoided planned degradation is classified as IFM.
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	General and Definitions
ESI Findings - Round 1 (18 April 2012)	FCOP Conservation and Avoided Deforestation is different than REDD in that it only addresses preventing the direct human-induced conversion of Forestland to a non-forest land for such things as residential, commercial, industrial, and agricultural use. REDD in VCS is about planned deforestation or unplanned deforestation or degradation and is therefore broader.
Round 1 NCR/CL/OFI (23 April 2012)	None
Round 1 Response from Client (18 April 2012)	None
ESI Findings - Round 2 (23 April 2013)	FCOP Conservation and Avoided Deforestation is different than REDD in that it only addresses preventing the direct human-induced conversion of Forestland to a non-forest land for such things as residential, commercial, industrial, and agricultural use. REDD in VCS is about planned deforestation or unplanned deforestation or degradation and is therefore broader.
Round 2 NCR/CL/OFI (10 June 2013)	CL: Please clarify the use of Conservation and Avoided Deforestation in FCOP.
Round 2 Response from Client (23 August 2013)	The term REDD is now used in place of Conservation and Avoided Deforestation, and the definition has been updated, focusing on conversion of forest to non-forest. Note however that we have not included degradation of forests remaining forests in the REDD definition, as in a BC context this would overlap with IFM. The degradation piece really only makes sense in an unplanned setting, which this methodology does not cover.
ESI Findings - Round 3 (31 October 2013)	The methodology is now consistent with definitions in VCS but does not address unplanned degradation of forests (rare in the BC context) or planned degradation which has been considered to be covered under IFM. There is no requirement for the methodology to allow as eligible activities all those allowed in the VCS standard. This finding is addressed.

Item Number	84
VCS AFOLU Requirements Version 3.4 (REDD) (08 October 2013)	c) Planned degradation includes activities where a forest system would have been cleared and replaced by a different forest system with a lower carbon stock and where the recovery of timber was not the primary objective of the initial forest clearance. For example, national land plans to reduce the forest estate and convert it to industrial-scale production of commodities such as pulpwood and oil palm, where the converted land would still meet the country definition of forest land, are considered planned degradation.
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Definitions and Applicability Criteria
ESI Findings - Round 1 (18 April 2012)	Agricultural land is not eligible under FCOP and use of forest to produce biofuels is not eligible either.
Round 1 NCR/CL/OFI (23 April 2012)	None
Round 1 Response from Client (18 April 2012)	None
ESI Findings - Round 2 (23 April 2013)	It is unclear if projects that harvest wood to create biofuel are excluded or included from using FCOP, as the section mentioning this has been removed.
Round 2 NCR/CL/OFI (10 June 2013)	CL: Please clarify if projects that harvest wood to create biofuel are excluded or included from using FCOP, as the section mentioning this has been removed, but the methodology assessor did not note an explicit exclusion.
Round 2 Response from Client (23 August 2013)	These projects are included, and we do not note any text which would bring this into doubt.
ESI Findings - Round 3 (31 October 2013)	There is no requirement to provide examples of all possible avoided planned deforestation activities (avoided conversion to biofuels). Although the methodology text has very little information on REDD activities, the definitions and applicability criteria do not conflict with VCS requirements. This finding is addressed.

Item Number	85
VCS AFOLU Requirements Version 3.4 (REDD) (08 October 2013)	d) Avoided planned deforestation and degradation can include decisions by individual land owners, governments, or community groups, whose land is legally zoned for agriculture, not to convert their forest(s) to crop production or biofuel plantations. For example, a community may determine that GHG credits from forest protection are more valuable than the potential revenue from crop or commodity production. Similarly, an owner of land zoned for conversion to agriculture or urban development may choose to protect forested lands by partnering with a conservation organization, either in a joint management agreement or an outright sale.
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	None
ESI Findings - Round 1 (18 April 2012)	In a planned conversion, commercially valuable timber would likely be extracted in BC prior to clearing, and in FCOP, associated emissions and the HWPs would need to be accounted for as part of the baseline.
Round 1 NCR/CL/OFI (23 April 2012)	None
Round 1 Response from Client (18 April 2012)	None
ESI Findings - Round 2 (23 April 2013)	In a planned conversion, commercially valuable timber would likely be extracted in BC prior to clearing, and in FCOP, associated emissions and the HWPs would need to be accounted for as part of the baseline. This did not appear to be explicitly addressed in FCOP.
Round 2 NCR/CL/OFI (10 June 2013)	CL: Please clarify if associated emissions and HWPs from a planned conversion, where commercially valuable timber would likely be extracted in BC prior to clearing, has been accounted for as part of the baseline.
Round 2 Response from Client (23 August 2013)	Note that quantification of both HWPs and their associated emissions are required (Y) in tables 6 and 7, so quantification is required.
ESI Findings - Round 3 (31 October 2013)	The methodology does not specifically indicate whether emissions from timber extracted prior to more complete forest clearing is accounted, for but the protocol does indicate in Table 6 that, for all types of REDD methodology baselines, the emissions from harvested wood products must be accounted for. There is nothing to indicate that timber extracted prior to more complete forest clearing would be excluded from this requirement. This item is addressed.

Item Number	86
VCS AFOLU Requirements Version 3.4 (REDD) (08 October 2013)	4.4.5 The baseline for REDD projects is comprised of a land-use and land-cover (LU/LC) change component and a carbon stock change component. These components may be addressed separately in a methodology as their scale of analysis may differ.
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Section 8
ESI Findings - Round 1 (18 April 2012)	The baseline approach selected for this project type is the projection-based approach. To select the most likely baseline scenario, the generic requirements for identifying baseline candidates and selecting a project-specific baseline scenario described in Chapter 7 and Chapter 8 Sections 8.1 and 8.2 of the WRI/WBCSD GHG Protocol November 2005 version are to be used (page 40 of FCOP). The LU/LC approach is not directly addressed in FCOP.
Round 1 NCR/CL/OFI (23 April 2012)	None
Round 1 Response from Client (18 April 2012)	None
ESI Findings - Round 2 (23 April 2013)	Land use/land cover change is not specifically addressed.
Round 2 NCR/CL/OFI (10 June 2013)	NCR: The methodology assessor did not note the specific reference to LU/LC cover change in FCOP for REDD baseline scenarios. Please address.
Round 2 Response from Client (23 August 2013)	Text has been added to the REDD definition to identify both land-use and land-cover change as components. Within the BC context, the distinction of LU/LC and carbon stock change as separate components was not necessary, as that distinction arises where grids of x by x land use changes and carbon stock changes are a likely analysis method. With BC's highly developed forest inventories and inventory and modelling techniques, this classified approach is not necessary.
ESI Findings - Round 3 (31 October 2013)	Including LU/LC in the definition does not satisfy this requirement. It was unclear how LU/LC was included in Section 7.1 where FCOP now includes procedures for determining the baseline.
Round 3 NCR/CL/OFI (01 November 2013)	CL: Please clarify how LU/LC was included in Section 7.1 where FCOP now includes procedures for determining the baseline.

Round 3 Response from Client (17 January 2014)	Text has been added to the text box for the outcome of step 3 in section 7.1 to re-emphasize the relation between LULC change and REDD. Text has also been added to section 8.1.1.1.1 to address the relationship between stratification and baseline LULC change patterns.
ESI Findings - Round 4 (14 February 2014)	The added text to both Section 7.1 and 8.1.1.1.1 clarify how LU/LC are included in REDD baseline, which is consistent with VCS. This item is addressed.

Item Number	87
VCS AFOLU Requirements Version 3.4 (REDD) (08 October 2013)	a) Where it is common practice in the area for timber to be removed before clearing, then wood products shall be included in the baseline scenario.
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Section 5.2
ESI Findings - Round 1 (18 April 2012)	This is common practice in BC.
Round 1 NCR/CL/OFI (23 April 2012)	None
Round 1 Response from Client (18 April 2012)	None
ESI Findings - Round 2 (23 April 2013)	It is unclear where this requirement is met.
Round 2 NCR/CL/OFI (10 June 2013)	CL: The assessor could not find explicit statements that met this requirement.
Round 2 Response from Client (23 August 2013)	See tables 5 and 6
ESI Findings - Round 3 (31 October 2013)	Tables 5 and 6 are used for selecting carbon pools and sources. The methodology assessor found no connection between these tables and the requirement that wood products be included in the baseline scenario.
Round 3 NCR/CL/OFI (01 November 2013)	NCR: Please address the finding.
Round 3 Response from Client (17 January 2014)	FCOP conservatively requires wood products to be accounted in all cases, thereby inherently meeting this requirement.

ESI Findings - Round 4 (14 February 2014)	Since wood products are a required Pool in all cases (Table 5), this can be considered addressed.

Item Number	88
VCS AFOLU Requirements Version 3.4 (REDD) (08 October 2013)	4.5.15 Procedures for quantifying GHG emissions/removals in all selected carbon pools may reference IPCC 2006 Guidelines for National GHG Inventories sections on conversion of forest to non-forest (for deforestation) and forests remaining as forest (for degradation).
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Section 1 and 10
ESI Findings - Round 1 (18 April 2012)	FCOP does not directly reference this.
Round 1 NCR/CL/OFI (23 April 2012)	None
Round 1 Response from Client (18 April 2012)	None
ESI Findings - Round 2 (23 April 2013)	The reference to IPCC Guidelines needs to be included in Section 1.
Round 2 NCR/CL/OFI (10 June 2013)	NCR: Although Section 10 References lists the "IPCC Guidelines for National Greenhouse Gas Inventories. IPCC, (2006)", please include this in Section 1 Sources.
Round 2 Response from Client (23 August 2013)	Added to section 1.1
ESI Findings - Round 3 (31 October 2013)	The requirement has been added to Section 1.1. This item is addressed.

Item Number	89
VCS AFOLU Requirements Version 3.4 (REDD) (08 October 2013)	4.5.16 Procedures for quantifying GHG emissions/removals in long-lived wood products (e.g., wood products lasting longer than five years) may reference published scientific peer-reviewed literature (such as Skog et al. 2004).

Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Section 8
ESI Findings - Round 1 (18 April 2012)	FCOP does not directly reference this.
Round 1 NCR/CL/OFI (23 April 2012)	None
Round 1 Response from Client (18 April 2012)	None
ESI Findings - Round 2 (23 April 2013)	It is unclear where long-lived wood products' quantification is addressed.
Round 2 NCR/CL/OFI (10 June 2013)	CL: Please clarify where long-lived wood products' quantification is addressed.
Round 2 Response from Client (23 August 2013)	Information is in section 8.1.1.2
ESI Findings - Round 3 (31 October 2013)	The term long-lived wood products is not used in FCOP. However, this topic is dealt with in section 8.1.1.2. Reference is made to peer-reviewed literature by Dymond 2012 and Winjum et al (date not indicated) saying only that these authors have worked on quantification of these processes. It is not clear how (or even if) these two sources of information were used in developing the tables that have been later included in the document. This section on quantification of GHG emissions/ removals in HWPs is cumbersome and appears to be more complicated than necessary omitting, for example, any reference to an on-line calculator that Dymond has produced that simplifies the calculations.
Round 3 NCR/CL/OFI (01 November 2013)	OFI: Please address the finding.
Round 3 Response from Client (17 January 2014)	Full references for Dymond and Winjum are given in footnotes to section 8.1.1.2., and text has been added to this section making it explicate that these were the sources used to derive the numbers given in Tables 9 and 11. We believe that the methods given are no more complex than use of the online calculator.
ESI Findings - Round 4 (14 February 2014)	Since this was an OFI, it and new language has been added to link the referenced sources to FCOP, this can be considered addressed, even though the developer opted not to allow use of the online calculator.

Item Number	90
VCS AFOLU Requirements Version 3.4 (REDD) (08 October 2013)	1) APD: Leakage shall be quantified by directly monitoring the activities of the deforestation agent identified in the baseline scenario. The deforestation agent can be an entity that has ownership of, management of, or legally sanctioned rights to use, multiple parcels of forest land within the country or can be the most-likely-class of deforestation agent. Such forest land could be used to make up for the generation of goods and/or services lost through implementation of the REDD project, therefore leading to reductions in carbon stocks or increases in GHG emissions outside the project boundary. Leakage shall be accounted for as follows:
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Section 8.3.1.1
ESI Findings - Round 1 (18 April 2012)	With respect to leakage for avoided deforestation, FCOP focusses on assessing the change in key project and baseline activity levels that are under the control of the project proponent, namely harvesting levels and amount of land-use conversion. This is consistent with VCS if the deforestation agent is the project proponent but if not, then it is inconsistent because FCOP states (8.3.1) that it is impractical to try to assess project and baseline removals from <u>affected</u> pools individually prior to determining the net change between project and baseline. Instead, the approaches described in FCOP focus on assessing the change in key project and baseline activity levels that are under the control of the project proponent, and then using this change in activity to estimate the reduced removals that would be associated with project activities that occur at locations outside the project boundary. This statement is pretty vague however.
Round 1 NCR/CL/OFI (23 April 2012)	None
Round 1 Response from Client (18 April 2012)	None
ESI Findings - Round 2 (23 April 2013)	None
Round 2 NCR/CL/OFI (10 June 2013)	See NCRs for Leakage in the AFLOU ARR tab, lines 24 and 25. Ensure REDD is considered.
Round 2 Response from Client (23 August 2013)	The methodology now includes methods for both known deforestation agents, and classes of agents. This issue is addressed in 8.3.1.1
ESI Findings - Round 3 (31 October 2013)	None
Round 3 NCR/CL/OFI (01 November	Pending NCR 179 in Row 25 of the AFOLU_ARR tab.

2013)	
Round 3 Response from Client (17 January 2014)	None
ESI Findings - Round 4 (14 February 2014)	Similar to the findings for IFM leakage, the requirements for REDD leakage quantification are different than other project types. FCOP does not appear to differentiate in its requirements for accounting of leakage.
Round 4 NCR/CL/OFI (18 February 2014)	CL: Please demonstrate how FCOP takes into account the REDD-specific VCS leakage requirements, as the sections in FCOP do not appear to differentiate leakage quantification for different project types.
Round 4 Response from Client (05 May 2014)	Having noted the intent of the first paragraph of section 4.6.1, that "Methodologies shall establish procedures to quantify all significant sources of leakage.", and taking into account forest management methods and regulations in British Columbia, we have established more stringent and conservative leakage calculation requirements for REDD projects than those laid out in section 4.6.15 of the AFOLU Requirements. Specifics are discussed below. Note that FCOP requires Market Leakage to be accounted in all cases, in distinction to the approach laid out in the AFOLU Requirements. For a highly industrialized forest sector like that occurring in BC, accounting only for activity shifting leakage is highly likely to be non-conservative, and would therefore not meet the spirit of the overarching VCS guidance found in the first paragraph of 4.6.1.
ESI Findings - Round 5 (20 May 2014)	Procedures for quantification of leakage are sufficiently detailed to capture activities specific to REDD APD, whether the deforestation can be named or not. Although the methodology leakage requirements do not differentiate among project types, the sequence of steps ensures individual AFOLU Requirements are met. Specific criteria are evaluated below. This item is addressed.

Item Number	91
VCS AFOLU Requirements Version 3.4 (REDD) (08 October 2013)	a) Where the specific deforestation agent can be identified, leakage need not be considered where it can be demonstrated that the management plans and/or land-use designations of the deforestation agent's other lands (which shall be identified by location) have not materially changed as a result of the project (e.g., the deforestation agent has not designated new lands as timber concessions, increased harvest rates in lands already managed for timber, cleared intact forests for agricultural production or increased fertilizer use to enhance agricultural yields). Where management plans and/or land-use designations of the deforestation agent's other lands have materially changed, leakage shall be quantified by directly monitoring the activities of the deforestation agent.
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Section 8.3.1.1

ESI Findings - Round 1 (18 April 2012)	Whether the deforestation agent can be specifically identified is not directly addressed in FCOP. Where the agent can be identified, there is no requirement in FCOP to evaluate management plans or other land-use designations although there is nothing in FCOP to prevent this.
Round 1 NCR/CL/OFI (23 April 2012)	None
Round 1 Response from Client (18 April 2012)	None
ESI Findings - Round 2 (23 April 2013)	None
Round 2 NCR/CL/OFI (10 June 2013)	See NCRs for Leakage in the AFLOU ARR tab, lines 24 and 25. Ensure REDD is considered.
Round 2 Response from Client (23 August 2013)	The methodology now includes methods for both known deforestation agents, and classes of agents. This issue is addressed in 8.3.1.1
ESI Findings - Round 3 (31 October 2013)	None
Round 3 NCR/CL/OFI (01 November 2013)	Pending NCR 179 in Row 25 of the AFOLU_ARR tab.
Round 3 Response from Client (17 January 2014)	None
ESI Findings - Round 4 (14 February 2014)	Similar to the findings for IFM leakage, the requirements for REDD leakage quantification are different than other project types. It does not appear the specific requirements for REDD are differentiated in the Leakage section of FCOP.
Round 4 NCR/CL/OFI (18 February 2014)	CL: Please refer to 200 above and ensure 4.6.15 1)a) is required in FCOP.
Round 4 Response from Client (05 May 2014)	Identification of the specific deforestation agent (where possible) takes place in Section 8.3.1.1 - 2. However, note that in section 8.3.1.1 - 1, we have specifically required that no internal activity shifting leakage (where that agent is the proponent) takes place. Otherwise, the procedures are congruent with VCS 4.6.15 1) a), and are contained in section 8.3.1.1 - 4.
ESI Findings - Round 5 (20 May 2014)	The methodology requires that, in the case of identification of the deforestation agent, intentions, determination of material changes and subsequent quantification of the changes occurs (Step 4). Appropriately, internal activity shifting leakage is not accounted for. See finding immediately above for adherence to AFOLU Requirements for all project categories. This item is addressed.

Item Number	92
VCS AFOLU Requirements Version 3.4 (REDD) (08 October 2013)	b) Where the specific deforestation agent cannot be identified, leakage shall be quantified based upon the difference between historic and with-project rates of deforestation by the identified most-likely-class of deforestation agent within the region. Alternatively, where such agents are driven by the demand for market commodities, the project may directly account for market leakage associated with the specific project activity. Where directly accounting for leakage, market leakage shall be accounted for at the country-scale, taking into account the supply and demand elasticities for the commodity affected, and shall be based on methods for quantifying leakage from scientific peer-reviewed journal sources, as described above in Section 4.6.14.
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Section 8.3.1.1
ESI Findings - Round 1 (18 April 2012)	Whether the deforestation agent can be specifically identified is not directly addressed in FCOP. The approach used in FCOP is not described the way it is in this question (difference between historic and with-project rates of deforestation) and market leakage is not a term used in FCOP. FCOP does provide for directly accounting for leakage for internal shifting and external shifting but not in the same way described in AFOLU protocol. External <u>land use shifting</u>, must be addressed by the project proponent by undertaking a land use analysis for the baseline land use type in a geographic area of justified size surrounding the project area, and must consider: the state of supply and demand for the baseline land use type; all zoning bylaws, covenants, easements etc.; community development plans and regional growth strategies; other restrictions such that there is no opportunity for the baseline land use to shift to other Forest Land; and availability of other forest lands that might be eligible for deforestation and conversion to the baseline land use type. In assessing external <u>harvest shifting</u> leakage, the project proponent must identify the percentage of the difference between project and baseline harvesting that is expected to shift to lands outside the ownership or control of the project proponent using provincial base case leakage estimates (Table 15) or estimating project-specific leakage directly. If estimating project specific leakage, a complex approach using a formula proposed by Murray et al and a series of assumptions and variables on things like price and demand elasticity, product substitution, and preservation across North America, is recommended and this may be at least equivalent to market leakage at the country scale.
Round 1 NCR/CL/OFI (23 April 2012)	None
Round 1 Response from Client (18 April 2012)	None
ESI Findings - Round 2 (23 April 2013)	None
Round 2 NCR/CL/OFI (10 June 2013)	See NCRs for Leakage in the AFLOU ARR tab, lines 24 and 25. Ensure REDD is considered.

Round 2 Response from Client (23 August 2013)	The methodology now includes methods for both known deforestation agents, and classes of agents. This issue is addressed in 8.3.1.1
ESI Findings - Round 3 (31 October 2013)	None
Round 3 NCR/CL/OFI (01 November 2013)	Pending NCR 179 in Row 25 of the AFOLU_ARR tab.
Round 3 Response from Client (17 January 2014)	None
ESI Findings - Round 4 (14 February 2014)	Similar to the findings for IFM leakage, the requirements for REDD leakage quantification are different than other project types. It does not appear the specific requirements for REDD are differentiated in the Leakage section of FCOP.
Round 4 NCR/CL/OFI (18 February 2014)	CL: Please refer to 200 above and ensure 4.6.15 1)b) is required in FCOP.
Round 4 Response from Client (05 May 2014)	Where the specific agent cannot be identified, procedures laid out in 8.3.1.1.-5 are to be followed, which use the standard leakage zone method. Note however, as discussed above, that FCOP requires market leakage to be accounted in all cases.
ESI Findings - Round 5 (20 May 2014)	For cases where the deforestation agent is not identified, the methodology specifies a regional land-use analysis using a "leakage zone". Market leakage is an option, and procedures for this option are in accordance with this AFOLU requirement (evaluated elsewhere in this checklist, i.e. commodity driven direct accounting). This item is addressed.

Item Number	93
VCS AFOLU Requirements Version 3.2 (IFM) (01 Feb 2012)	4.2.3 Eligible IFM activities are those that increase carbon sequestration and/or reduce GHG emissions on forest lands managed for wood products such as sawtimber, pulpwood and fuelwood by increasing biomass carbon stocks through improving forest management practices. The baseline and project scenarios for the project area shall qualify as forests remaining as forests, such as set out in the IPCC 2006 Guidelines on National GHG Inventories, and the project area shall be designated, sanctioned or approved for wood product management by a national or local regulatory body (e.g., as logging concessions or plantations).
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Section 5.1 and Footnote 24
ESI Findings - Round 1 (18 April 2012)	Standard practice except on some private lands where the land may not necessarily be designated, sanctioned or approved for wood product management by a national or local regulatory body (although local laws would not prevent it from being managed in such a way).

Round 1 NCR/CL/OFI (23 April 2012)	None
Round 1 Response from Client (18 April 2012)	None
ESI Findings - Round 2 (23 April 2013)	It is unclear how the specific instance would be applied on some private lands where the land may not necessarily be designated, sanctioned or approved for wood product management by a national or local regulatory body.
Round 2 NCR/CL/OFI (10 June 2013)	CL: Although this appears standard practice, please detail how the specific instance would be applied on some private lands where the land may not necessarily be designated, sanctioned or approved for wood product management by a national or local regulatory body.
Round 2 Response from Client (23 August 2013)	Additional text added to section 5.1 to deal with this and related issues.
ESI Findings - Round 3 (31 October 2013)	The requirement to demonstrate that a project area has been designated, sanctioned, or approved for wood production on private land areas has been addressed in the last paragraph in section 5.1 of the PD. The section continues to include language that is open for mis-interpretation however. The document includes the phrase: "unique identification of the project area, as per section 3(2)(f) of the BC EOR" and later on also reference section 3 in a similar way.
Round 3 NCR/CL/OFI (01 November 2013)	OFI: To avoid potential for erroneous application the proponent could either state what is contained in the reg or provide a reference date for the legislation (for e.g. as set out in section 3(2)(f) of the BC EOR as it existed on Oct. 22, 2013...) in case the regulation changes. Please address.
Round 3 Response from Client (17 January 2014)	Change made as suggested
ESI Findings - Round 4 (14 February 2014)	Footnote 24 explains the origin/date of the required information to describe the project area. There is no added language that requires the latest version of Section 3 of the BC EOR.
Round 4 NCR/CL/OFI (18 February 2014)	OFI: Although there is now a Footnote 24 describing the version of the BC EOR where required information was derived, it should state somewhere in above paragraph that requires the latest version of the BC EOR be referenced.
Round 4 Response from Client (05 May 2014)	Text added to address this issue
ESI Findings - Round 5 (20 May 2014)	An exact reference to the BC EOR was inserted as footnote 23, including the version date. The item is addressed.

Item Number	94
VCS AFOLU Requirements Version 3.2 (IFM) (01 Feb 2012)	3) <u>Extended Rotation Age / Cutting Cycle (ERA)</u>: This category includes practices that reduce net GHG emissions of evenly aged managed forests by extending the rotation age or cutting cycle and increasing carbon stocks. Because trees are typically harvested at an economically optimal rotation age before they are fully mature, extending the age at which the trees are cut increases the average carbon stock on the land. There is no fixed period of years over which the extension should occur, but generally the longer the period, on the order of 5 to 20 years, the more the average carbon stock increases. ERA activities may also include extending the cutting cycle or harvest schedule in uneven-aged forest management that may have similar effects as extending rotation age in even-aged forest management. Though such activities may have a limited carbon benefit, where methodologies are able to establish criteria and procedures for the credible monitoring of such activities, they are eligible. Examples of extending cutting cycles are:
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Section 5.1
ESI Findings - Round 1 (18 April 2012)	I think this may be an example of how the lack of ownership and control by the proponent in BC may be problematic with respect to protecting unlogged forests that would otherwise be logged, or extending rotation ages. 95% of BC forest land is publicly owned and timber harvesting and management rights are conferred through many different forms of tenure agreement. A project proponent (unless it is the crown) does not actually have the legal authority to prevent logging, extend a rotation, or change allowable cut levels for most types of tenure. If a project proponent were not the Crown, an agreement would need to be made with the Crown for a given geographic area to do these things (and this would be counter to many BC Ministry of Forests, Lands, and Natural Resource Operations policies and may even have some legal repercussions). I am not sure if this needs to be dealt with or not under VCS but FCOP does not address the ownership/control issue. The type of detail foreseen in question 3) is not addressed in FCOP.
Round 1 NCR/CL/OFI (23 April 2012)	None
Round 1 Response from Client (18 April 2012)	None
ESI Findings - Round 2 (23 April 2013)	FCOP does not address the ownership/control issues in BC. The type of detail foreseen in question 3) is not addressed in FCOP.
Round 2 NCR/CL/OFI (10 June 2013)	NCR: Please address the finding.
Round 2 Response from Client (23 August 2013)	It is not clear that the text from the AFOLU requirements creates any additional specific criteria which must be met. However, the NCR does identify a significant issue regarding ownership/control where projects occur on Crown land. Text has been added to section 5.1 to address this issue.
ESI Findings - Round 3 (31 October 2013)	Additional text has been added in section 5.1 addressing ownership requiring that the proponent demonstrate control over the area, such that project benefits can be maintained, that they have the rights to maintain the benefits of the project, and/or that they have primary management control. This item is addressed.

Item Number	95
VCS AFOLU Requirements Version 3.2 (IFM) (01 Feb 2012)	i) They qualify as forest as defined by the host country for its UNFCCC national inventory accounting, but contain minimal to no timber of commercial value.
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Section 3; Definitions
ESI Findings - Round 1 (18 April 2012)	Under FCOP forest land is defined as land being capable of having 25% crown cover and 5m tall trees at maturity. No reference is made to the UNFCCC convention.
Round 1 NCR/CL/OFI (23 April 2012)	None
Round 1 Response from Client (18 April 2012)	None
ESI Findings - Round 2 (23 April 2013)	The UNFCCC convention does not appear to be used.
Round 2 NCR/CL/OFI (10 June 2013)	NCR: Although it appears the correct forest definition is used, please reference the UNFCCC convention.
Round 2 Response from Client (23 August 2013)	Forest Land definition has been updated
ESI Findings - Round 3 (31 October 2013)	The definition of forest land has been changed in Section 3 to include the UNFCCC reference.

Item Number	96
VCS AFOLU Requirements Version 3.2 (IFM) (01 Feb 2012)	1) Documented evidence of the project proponent's operating history, such as five or more years of management records, to provide evidence of normal historical practices. Management records may include, inter alia, data on timber cruise volumes, length of roads and skid trails, inventory levels, and harvest levels within the project area. Where the project proponent or implementing partner is a new owner or management entity and does not have a history of management practices within the project area, procedures shall be established to identify the most plausible baseline scenario based upon the most likely owner or operator, noting the following

Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Section 6
ESI Findings - Round 1 (18 April 2012)	FCOP does not use the terms project based approach and performance benchmark but rather offers 7 dif options for determining baseline (only 3 for IFM - dynamic historic benchmark, dynamic projection-based approach, or comparison-based). The pros and cons of each of these alternatives are described and some rationale for why these options were selected is provided, however, details on how to establish each of these approaches are not provided (I think Caroline had some concerns around this).
Round 1 NCR/CL/OFI (23 April 2012)	None
Round 1 Response from Client (18 April 2012)	None
ESI Findings - Round 2 (23 April 2013)	FCOP does not use the VCS terms project based approach and performance benchmark but rather uses historic benchmark and projection-based approach (6.1.1). It is not clear that these terms are equivalent to VCS.
Round 2 NCR/CL/OFI (10 June 2013)	NCR: Please indicate whether the protocol allows for a project based approach, and if so, how it meets the requirements of 4.4.5.
Round 2 Response from Client (23 August 2013)	There is understandable confusion here regarding the terms "historic benchmark" and "projection based" approaches. In fact, both of these are project based approaches - one just uses a historic benchmark for the project area, while the other uses a modelled approach. However, after further review, section 6.1.1 of the methodology has been removed, as it appeared to add little additional benefit, and was confusing.
ESI Findings - Round 3 (31 October 2013)	As the entire section was removed, this item can be addressed.

Item Number	97
VCS AFOLU Requirements Version 3.2 (IFM) (01 Feb 2012)	2) Adherence to the legal requirements for forest management and land use in the area unless verifiable evidence is provided demonstrating that common practice in the area does not adhere to such requirements.
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Section 6
ESI Findings - Round 1 (18 April 2012)	Reference is made in FCOP that project activities must comply with the law. This is common practice in BC.
Round 1 NCR/CL/OFI (23 April 2012)	None

Round 1 Response from Client (18 April 2012)	None
ESI Findings - Round 2 (23 April 2013)	The protocol indicates (6.1.2.1) that where a projection-based baseline approach is used, the project proponent must: prepare a verifiable record of common forest management practices ... and Identify forest management practices that are required by law, ... employ legal barriers, and ... perform the common practice review.
Round 2 NCR/CL/OFI (10 June 2013)	NCR: Please indicate in the protocol whether projection-based has the same meaning as "project-based" and that adherence to legal requirements is required (rather than simply identified or considered).
Round 2 Response from Client (23 August 2013)	As above
ESI Findings - Round 3 (31 October 2013)	As the entire section was removed, this item can be addressed.

Item Number	98
VCS AFOLU Requirements Version 3.2 (IFM) (01 Feb 2012)	3) Baseline environmental management practices shall not be set below (i.e., be less environmentally robust than) those commonly considered a minimum standard among similar landowners in the area. For example, where common practice exceeds minimum legal practice, the baseline cannot be the minimum legal requirement and the baseline scenario shall, at a minimum, be based on common practice.
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Section 6
ESI Findings - Round 1 (18 April 2012)	Common practice in BC for some aspects of management (e.g. stocking levels) exceeds minimum requirements established in law. FCOP does not explicitly state that baseline cannot be lower than common practice but this is implied in the description of approaches in section 6.1.4.3 [e.g. PP must prepare a verifiable record of common forest management practices within a geographic region; identify forest management practices that are required by law (including regulations, mandatory orders, replanting requirements following harvest, etc.) that affect the project site, or perform the common practice review as described in Section 8.2.3 of the WRI/WBCSD GHG Protocol November 2005 version].
Round 1 NCR/CL/OFI (23 April 2012)	None
Round 1 Response from Client (18 April 2012)	None
ESI Findings - Round 2 (23 April 2013)	It is unclear how FCOP meet the requirements.

Round 2 NCR/CL/OFI (10 June 2013)	NCR: Please detail how FCOP has met the explicit requirements of 4.4.5, 3). The methodology assessor could not find an explicit statement in Section 6 of the methodology.
Round 2 Response from Client (23 August 2013)	Text added to section 7.1.2 Step 1a
ESI Findings - Round 3 (31 October 2013)	In demonstrating the baseline and project additionality, the PD indicates in section 7.1.2, Step 1a that, when it comes to identifying alternative scenarios to the proposed project activity, the proponent must identify alternative scenarios that "are based on environmental practices not less rigorous than common practice among forest managers in the area". Step 1a explicitly includes alternative baseline scenarios that meet this requirement.

Item Number	99
VCS AFOLU Requirements Version 3.2 (IFM) (01 Feb 2012)	4.5.11 Procedures for quantifying GHG emissions/removals in selected carbon pools may reference the IPCC 2006 Guidelines for National GHG Inventories section on forests remaining as forests.
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Section 1 and 10
ESI Findings - Round 1 (18 April 2012)	IPCC 2006 Guidelines for National GHG Inventories was not referenced in the section on Quantifying baseline emissions/removals.
Round 1 NCR/CL/OFI (23 April 2012)	None
Round 1 Response from Client (18 April 2012)	None
ESI Findings - Round 2 (23 April 2013)	Section 10 References lists the "IPCC Guidelines for National Greenhouse Gas Inventories. IPCC, (2006)", while it is not included in Section 1.
Round 2 NCR/CL/OFI (10 June 2013)	CL: Although Section 10 References lists the "IPCC Guidelines for National Greenhouse Gas Inventories. IPCC, (2006)", please include this in Section 1 Sources.
Round 2 Response from Client (23 August 2013)	None
ESI Findings - Round 3 (31 October 2013)	The reference is confirmed to now be included in FCOP. This item is addressed.

Item Number	100
VCS AFOLU Requirements Version 3.2 (IFM) (01 Feb 2012)	4.5.13 Where biomass is burned as part of the slash removal after harvesting, or nitrogen fertilizer is used, methodologies may reference IPCC 2006 Guidelines for National GHG Inventories for the quantification of such GHG emissions.
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	None
ESI Findings - Round 1 (18 April 2012)	The IPCC guidelines were referenced with respect to fertilizer inputs and N2O but not for biomass burning.
Round 1 NCR/CL/OFI (23 April 2012)	None
Round 1 Response from Client (18 April 2012)	None
ESI Findings - Round 2 (23 April 2013)	Section 10 References lists the "IPCC Guidelines for National Greenhouse Gas Inventories. IPCC, (2006)", while it is not included in Section 1.
Round 2 NCR/CL/OFI (10 June 2013)	CL: Although Section 10 References lists the "IPCC Guidelines for National Greenhouse Gas Inventories. IPCC, (2006)", please include this in Section 1 Sources.
Round 2 Response from Client (23 August 2013)	None
ESI Findings - Round 3 (31 October 2013)	The reference is confirmed to now be included in FCOP. This item is addressed.

Item Number	101
VCS AFOLU Requirements Version 3.2 (IFM) (01 Feb 2012)	4.6.13 Leakage in IFM projects can result from activities shifting within the project proponent's operations. It shall be demonstrated that there is no leakage to areas that are outside the project area but within the project proponent's operations, such as areas where the project proponent has ownership of, management of, or legally sanctioned rights to use forest land within the country. It shall be demonstrated that the management plans and/or land-use designations of all other lands operated by the project proponent (which shall be identified by location) have not materially changed as a result of the project activity (e.g., harvest rates have not been increased or land has not been cleared that would otherwise have been set aside). Where the project proponent is an entity with a conservation mission, it may be demonstrated that there have been no material changes to other lands managed or owned by the project proponent by providing documented evidence that it is against the policy of the organization to change the land use of other owned and/or managed lands including evidence that such policy has historically been followed.
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Section 8.3
ESI Findings - Round 1 (18 April 2012)	Leakage from IFM projects is described but not specifically for IFM (see the ARR sheet, question 4.6.8) for land use shifting leakage and harvest shifting leakage (both internal and external) for affected carbon pools. There is no specific requirement in FCOP to demonstrate that the management plans and/or land-use designations of all other lands operated by the project proponent (which shall be identified by location) have not materially changed as a result of the project activity. However, there are equivalent statements like, for example "*In each emission reduction report issued during the project, the project proponent must report on any deforestation activities that have occurred within the assessment area where the new land use is equivalent to the project's baseline land use. Where such deforestation is identified, the decrease in stored carbon that occurs as a result of the deforestation, considering decreases in forest carbon pools and increases in HWP pools as appropriate must be assessed using the same methods as for the project. The net decreases associated with that deforestation activity must be recorded as an affected land use shifting emission for the project*" (section 8.3.1.1). Note also the external land use shifting does not need to be accounted for in FCOP except for Conservation and Avoided Deforestation activities.
Round 1 NCR/CL/OFI (23 April 2012)	None
Round 1 Response from Client (18 April 2012)	None

ESI Findings - Round 2 (23 April 2013)	See NCRs for Leakage in the AFLOU ARR tab, lines 24 and 25. Leakage from IFM projects is described but not specifically for IFM (see the ARR sheet, question 4.6.8) for land use shifting leakage and harvest shifting leakage (both internal and external) for affected carbon pools. There is no specific requirement in FCOP to demonstrate that the management plans and/or land-use designations of all other lands operated by the project proponent (which shall be identified by location) have not materially changed as a result of the project activity.
Round 2 NCR/CL/OFI (10 June 2013)	NCR: See NCRs for Leakage in the AFLOU ARR tab, lines 24 and 25. Ensure IFM is included. Please address the finding.
Round 2 Response from Client (23 August 2013)	Language has been added to address this issue in sections 8.3.1.1 and 8.3.1.2
ESI Findings - Round 3 (31 October 2013)	Pending NCR 179 in Row 25 of the AFOLU_ARR tab.
Round 3 NCR/CL/OFI (01 November 2013)	None
Round 3 Response from Client (17 January 2014)	None
ESI Findings - Round 4 (14 February 2014)	The requirements for IFM leakage quantification are different than other project types. FCOP does not appear to differentiate in its requirements for accounting of leakage.
Round 4 NCR/CL/OFI (18 February 2014)	CL: Please demonstrate how FCOP takes into account the IFM-specific VCS leakage requirements, as the sections in FCOP do not appear to differentiate leakage quantification for different project types.
Round 4 Response from Client (05 May 2014)	Two specific issues are raised in the IFM specific leakage guidance 1) 4.6.13 - this point has been explicitly addressed in the methodology in section 8.3.1.1-1 2) 4.6.14 – this point has been discussed, and we have clarified that we are using direct accounting, as outlined in subsection 2) of this section, with the project proponent offered two accounting methods. Peer reviewed sources of the guidance offered to proponents is referenced within FCOP.
ESI Findings - Round 5 (20 May 2014)	Section 8.3.1.1 (1) of the FCOP sufficiently describes occurrence of internal leakage. Essentially the methodology developers have inserted the direct language of this requirement into the FCOP. While this language is clear and concise, a citation is needed to reference the material source. The methodology adheres to the IFM specific requirements for addressing leakage, and while it still does not identify the specific methods for calculating IFM leakage per the previous CL request, the methods outlined meet these requirements (4.6.13 and 4.6.14).
Round 5 NCR/CL/OFI (23 May 2014)	CL: Please properly cite section 8.3.1.1 (1) to indicate AFOLU Requirements section 4.6.13 as the source.

Round 5 Response from Client (22 July 2014)	Done
ESI Findings - Round 6 (28 August 2014)	Confirmed an appropriate citation was added to FCOP Section 8.3.1.1 for AFOLU Requirements section 4.6.13. This Item is addressed.

Item Number	102
VCS AFOLU Requirements Version 3.2 (IFM) (01 Feb 2012)	4.6.14 Leakage in IFM projects is predominantly attributable to market leakage (market effects), which shall be quantified by either of the following: 1) Applying the appropriate market leakage discount factor identified in Table 3 (***Page 54***) to the net change in carbon stock associated with the activity that reduces timber harvest. 2) Directly accounting for market leakage associated with the project activity. Where directly accounting for leakage, market leakage shall be accounted for at the country-scale applied to the same general forest type as the project (i.e., forests containing the same or substitutable commercial species as the forest in the project area) and shall be based on methods for quantifying leakage from scientific peer-reviewed journal sources.[11]
Evidence Used to Assess (Location in PD/MR or Supporting Documents)	Section 8.3
ESI Findings - Round 1 (18 April 2012)	In FCOP, the term market shifting leakage is not used. Land use shifting leakage and harvest shifting leakage are used and it is implied that market forces drive this type of leakage. The AFoLU factors in Table 3 are not used in FCOP but conservative harvest shifting leakage factors are provided for different regions of BC (table 15). FCOP does provide for directly accounting for leakage associated with the project activity if it is internal and it stipulates that leakage will be accounted for at the **North American scale**. It is not clear what some aspects of the methods provided were based on but Murray et al. 2004. "Estimating Leakage from Forest Carbon Sequestration Programs". Land Economics 80(1): 109-124 was referenced and in Appendix D, Song et al was referenced.
Round 1 NCR/CL/OFI (23 April 2012)	None
Round 1 Response from Client (18 April 2012)	None
ESI Findings - Round 2 (23 April 2013)	See NCRs for Leakage in the AFLOU ARR tab, lines 24 and 25.
Round 2 NCR/CL/OFI (10 June 2013)	NCR: See NCRs for Leakage in the AFLOU ARR tab, lines 24 and 25. Ensure IFM is included.
Round 2 Response from Client (23 August 2013)	Leakage section has been very substantially rewritten to comply with VCS leakage type definitions and requirements

ESI Findings - Round 3 (31 October 2013)	Market leakage discount factors have been provided as an option and explanations for directly accounting for market leakage use VCS terminology, require that the assessment areas contains forests with the same or substitutable commercial species as the forest in the project area, and provides examples of basing quantification methods on scientific peer-reviewed sources.
Round 3 NCR/CL/OFI (01 November 2013)	None
Round 3 Response from Client (17 January 2014)	None
ESI Findings - Round 4 (14 February 2014)	A note under Section 8.3.1.2 indicates both market and activity shifting leakage would only be relevant for REDD projects. This does not appear consistent with AFOLU Requirements 4.6.13 and 4.6.14, which discuss both activity shifting and market leakage for IFM projects.
Round 4 NCR/CL/OFI (18 February 2014)	NCR: Please further explain or clarify the note under Section 8.3.1.2, ensuring that all potential instances of both activity shifting *and* market leakage be identified for IFM projects, or explain where this already occurs in the FCOP.
Round 4 Response from Client (05 May 2014)	The "only potentially apply to REDD projects" phrase in the note has been removed, so that the note now applied to all projects.
ESI Findings - Round 5 (20 May 2014)	The statement mentioned in methodology developers round 4 response has been appropriately removed. As direct accounting is the only option offered to project proponents for quantifying leakage, the methodology appropriately accounts for market leakage at the country-scale applied to the same general forest type as the project for both methods using a variety of relevant parameters. Finding this item is addressed.

APPENDIX B – DOCUMENTS RECEIVED

Documents received 13 March 2012
- 2011 02 28 VCS MED for BC FCOP - Public Comments Review Revision v1 - Clean.docx
- 2011 02 28 VCS MED for BC FCOP - Public Comments Review Revision v1 - Tracked Changes.docx
- 2012 03 12 Public Comment Review Table - Final for Validator Review.xlsx

Documents received 18 April 2013
- ESI FCOP_2nd_Assessment_NCR's_Round_1_23_April_2012v2 RS.xlsx
- 2011 02 28 VCS MED for BC FCOP - ROUND 1 revisions V1.1 changes accepted.docx
- 2011 02 28 VCS MED for BC FCOP - ROUND 1 revisions V1.1 with track changes.docx

Documents received 23 August 2013
- Copy of 2013-06-07_FCOP_2nd_Assessment_Round_2_Review RS comment.xlsx
- 2011 02 28 VCS MED for BC FCOP - ROUND 2 revisions 0 35 (2).docx

Documents received 17 January 2014
- ESI 067_2013-11-01_FCOP_2nd_Assessment_Round_3 RS.xlsx
- 2011 02 28 VCS MED for BC FCOP - ROUND 3 revisions v1.docx
- 2011 02 28 VCS MED for BC FCOP - ROUND 3 revisions v1.pdf

Documents received 20 January 2014
- 2011 02 28 VCS MED for BC FCOP - ROUND 3 revisions v1.1.pdf
- 2011 02 28 VCS MED for BC FCOP - ROUND 3 revisions v1.1.docx

Documents received 05 May 2014
- ESI 067_2014-02-18_FCOP_2nd_Assessment_Round_4 complete rs.xlsx
- 2011 02 28 VCS MED for BC FCOP - ROUND 4 revisions V1.docx
- 2011 02 28 VCS MED for BC FCOP - ROUND 4 revisions V1.pdf
- Default factors and sources in FCOP.xlsx

Documents received 22 July 2014
- Song Chang and Aguilar - US softwood lumber demand.pdf
- 2011 02 28 VCS MED for BC FCOP - ROUND 5 revisions.docx
- 2011 02 28 VCS MED for BC FCOP - ROUND 5 revisions.pdf
- Default factors and sources in FCOP_ValidationMatrix ResponseRS.xlsx
- Dymond based HWP model for FCOP final 1.0.xlsx
- ESI 067_2014-05-23_FCOP_2nd_Assessment_Round_5 response.xlsx
- Hseu and Buongiorno price elasticities.pdf

Documents received 26 September 2014
- Skog HWP USA.pdf
- 067_2014-09-17_FCOP_2nd_Assessment_Round_6 response.xlsx
- 2014 09 22 VCS MED for BC FCOP.docx
- BC Coast Harvest 2006.xlsx
- Copy of Default factors and sources in FCOP_Validation_Matrix_Round_6Final response.xlsx
- Defualt_Factors_Large_Items_FCOP_Validation_Matrix_Round_6Final with responses.docx

- Dymond based HWP model for FCOP final 1.0 annotated.xlsx
- RE Definitions Section of the meth template.msg

Documents received 07 November 2014
- half life calculation sheet.xlsx
- 067_2014-10-19_FCOP_2nd_Assessment_Round_7 RS.xlsx
- 2014 10 16 VCS MED for BC FCOP.docx
- 2014 10 16 VCS MED for BC FCOP.pdf
- Default factors and sources in FCOP_Validation_Matrix_Round_7_2014-10-16 RS.xlsx
- derivation of green volume wood densities from Gonzalez.xlsx
- Dymond based HWP model for FCOP final 1.1 annotated.xlsx

Documents received 02 March 2015
- Response to ESI round 8.docx
- 2015 03 02 VCS MED for BC FCOP.docx
- 2015 03 02 VCS MED for BC FCOP.pdf
- Dymond based HWP model for FCOP final 1.2 annotated.xlsx
- FCOP changes made in response to SCS NCRs since Jan 1 2015.docx

Documents received 13 March 2015
- VCS_PCT_AssessmentReport_031315.pdf
- 2015 03 12 VCS MED for BC FCOP 2.docx

Documents received 23 March 2015
- BC Government Volume_to_Biomass_Conversion_Report.pdf
- 2015 03 12 VCS MED for BC FCOP 3.docx

Documents received 02 April 2015
- 2015 03 12 VCS MED for BC FCOP 3.1.docx

Documents received 08 April 2015
- 2015 03 12 VCS MED for BC FCOP 2.docx
- VCS_PCT_AssessmentReport_032715.pdf

APPENDIX C – EVIDENCE OF VVB ELIGIBILITY

Name of Project	Validation Report – Date Issued	Date Project Registered	GHG Program Registered With
Kariba REDD+ Project	29 September 2012	15 October 2012	VCS
Lower Mississippi Valley Grouped Afforestation Project	11 October 2012	12 November 2012	VCS
Restoration of degraded areas and reforestation in Cáceres and Cravo Norte, Colombia	24 February 2011	14 March 2011	VCS
TIST Program in Kenya VCS-001	2 March 2011	15 April 2011	VCS
TIST Program in Kenya VCS-002	2 March 2011	15 April 2011	VCS
TIST Program in Kenya VCS-003	2 March 2011	15 April 2011	VCS
TIST Program in Kenya VCS-004	2 March 2011	17 April 2011	VCS
TIST Program in Kenya VCS-005	16 December 2011	22 December 2011	VCS
Bull Run Overseas Forest Carbon Project: Phase 1	15 March 2012	13 April 2012	VCS
Redd Forests Grouped Project: Protection of Tasmanian Forest	13 December 2012	pending	VCS
TIST Program in Uganda VCS-001	20 March 2012	25 May 2012	VCS
TIST Program in Uganda VCS-002	20 March 2012	25 May 2012	VCS
TIST Program in Uganda VCS-003	20 March 2012	25 May 2012	VCS
TIST Program in Uganda VCS-004	20 March 2012	25 May 2012	VCS
Protection of the Bolivian Amazon Forest	26 March 2012	25 May 2013	VCS
Reforestation of Degraded Lands in the Valle California of Patagonia, Chile	18 June 2012	29 August 2012	VCS
April Salumei Sustainable Forest Management Project	08 October 2013	complete	VCS
TIST Program in Kenya – VCS-006	27 September 2012	01 October 2012	VCS
TIST Program in Uganda – VCS-005	7 March 2013	13 March 2013	VCS
TIST Program in Uganda – VCS-006	7 March 2013	13 March 2013	VCS

TIST Program in India VCS-001	7 March 2013	13 March 2013	VCS
Avoiding Planned Deforestation and Degradation in the Valdivian Coastal Reserve, Chile	12 November 2013	complete	VCS
TIST Program in Kenya – VCS-009	7 March 2013	13 March 2013	VCS
Reforesting Degraded Lands in Chile Through the use of Mycorrhizal Inoculation	23 April 2013	02 May 2013	VCS
Tasmanian Land Conservancy– New Leaf Project	29 October 2013	complete	VCS/CCB