

Forest Project Validation and Verification Report for the American Carbon Registry

Client Name: Blue Source
Project: Blue Source – Hawk Mountain Improved
Management Project (Project ID: ACR375)

Lead Verifier: Letty B. Brown
Technical Reviewer: Zane Haxtema
Report Date: 8 November 2018

SCS Contact Info: SCS Global Services
2000 Powell Street, Ste. 600
Emeryville, CA 94608
Cpollet-young@scsglobalservices.com

Table of Contents

Forest Project Validation Report for the American Carbon Registry	1
I. Summary	3
II. Introduction	3
III. Project Description	3
IV. Validation/Verification Specifications	4
A. Objectives.....	4
B. Level of Assurance	4
C. Treatment of Materiality	4
D. Scope.....	4
V. Validation/Verification Team	5
VI. Validation/Verification Process	6
A. ACR Certification	7
B. Desk Assessment.....	7
C. Site Visit.....	7
D. Findings	8
VII. Validation Activities	8
A. Eligibility	8
B. Location and Boundaries	9
C. Land Title and Ownership of Offset Credits	9
D. Start Date	9
E. Project Activities	9
F. GHG Sources, Sinks, and Reservoirs.....	10
G. Baseline Scenario and Additionality.....	10
H. Permanence	10
I. Quantification of Carbon Stock Changes	10
J. Ex-Ante Offset Projection.....	11
K. Data Management and QA/QC.....	11
L. Uncertainty	11
M. Leakage	11
N. Community and Environmental Impacts	12
VIII. Validation/Verification Opinion	12

I. Summary

This report presents the findings of the validation and verification assessment of the Blue Source – Hawk Mountain Improved Forest Management Project (Project) developed by Blue Source LLC.

The assessment was performed under the validation and verification guidance described in the ACR Validation and Verification Standard Version 1.1 (May 2018). In the course of the assessment, findings were developed and issued which included New Information Requests (NIRs) and Non-Conformity Reports (NCRs). All New Information Requests and Non-Conformity Reports have been adequately addressed by the project team, resulting in their closure.

On the basis of the information provided and the analyses completed, SCS was able to determine that the GHG Project Plan (Project Plan) and the Monitoring Report conform to the requirements of the ACR Standard, and the ACR-approved methodology, *Improved Forest Management (IFM) Methodology for Quantifying GHG Removals and Emission Reductions through Increased Forest Carbon Sequestration on Non-Federal U.S. Forestlands* (the Methodology).

II. Introduction

This document reports on validation and verification activities for the Blue Source – Hawk Mountain Improved Forest Management Project. Activities were focused on the evaluation of the Project Plan and the Monitoring Report against the requirements of the ACR Standard, ACR Validation and Verification Standard, and the ACR Methodology, *IFM Methodology for Quantifying GHG Removals and Emission Reductions through Increased Forest Carbon Sequestration on Non-Federal U.S. Forestlands* (referred to collectively as the ACR Requirements). This report presents the findings of the assessment and provides a description of the steps involved in the validation and verification process.

III. Project Description

The Project improves forest management in the Hawk Mountain Sanctuary, with the Hawk Mountain Sanctuary Association's management practices representing an improvement in the carbon storage and conservation value compared to higher return management regimes of industrial private lands in the region, which are characterized by shorter, even-aged rotations. The project area is located in Kempton Pennsylvania, across Berks and Schuylkill counties, and is located on 2,380.13 acres of mixed hardwood forest. The project describes the project activities as natural forest growth and maintenance harvests for essential activities and forest health. In addition, the project ensures long-term sustainable management of the forests, which could otherwise undergo commercial timber harvesting.

The project is expected to sequester approximately 242,438 tCO₂e (without risk buffer deduction) over the first crediting period of 20 years.

IV. Validation and Verification Specifications

A. Objectives

The objectives of this validation and verification assessment are to:

- Assess conformance of the Project Plan, the Monitoring Report and supporting documentation to the ACR requirements;
- Evaluate the methodologies for determination of the baseline scenario and additionality, for monitoring and quantification of GHG reductions, and for quality assurance and control;
- Evaluate the quantification of the baseline and ex-ante estimate of project GHG removal enhancements, leakage assessment, uncertainty calculation, and procedures followed in determining the non-permanence risk assessment;
- Evaluate reported net GHG emission reductions and removals;
- Evaluate whether the measurement and monitoring systems in place are capable of delivering high quality carbon stock measurements;
- Verify the reported emission reductions and removals for the first reporting period.

B. Level of Assurance

The level of assurance for this assessment is reasonable as opposed to absolute or limited. Reasonable assurance is attained by examining a sufficient amount of information, informed by the verifier's professional judgment.

C. Treatment of Materiality

ACR requires that discrepancies between the emission reductions/removal enhancements claimed by the project team and estimated by the verifier be less than the materiality threshold of plus or minus 5 percent.

D. Scope

The scope of the validation and verification assessment encompasses desk and site assessment activities for the Project against the following requirements:

- ACR Standard Version 5.0, February 2018 (ACR Standard)
- ACR's IFM Methodology for Quantifying GHG Removals and Emission Reductions through Increased Forest Carbon Sequestration on Non-Federal U.S. Forestlands Version 1.3, April 1, 2018 (Methodology)
- ACR Validation and Verification Standard Version 1.1, May 2018

The assessment was performed using the following client-supplied information:

- The Blue Source – Hawk Mountain Improved Forest Management project files; updated provided in the document files “HawkMountain_GHG Plan_1106_18.pdf” (Project Plan) and “Hawk_RP1_MonitoringReport_11_07_18” (Monitoring Report)
- Supporting documentation provided by the project team
- Observations made and interviews conducted during site visit of 16 May through 18 May 2018 at the Hawk Mountain Sanctuary, Pennsylvania

The assessment process included examination of:

- The project area boundaries and procedures for establishing the project area boundaries
- The remeasurement of carbon stocks in a subsample of project plots
- The temporal boundary
- GHG sinks within the project boundary
- Determination of the baseline scenario and additionality
- Methodologies and calculations used to generate estimates of emissions reductions/removal enhancements
- Project eligibility requirements
- Original data and documentation as relevant and required to evaluate the GHG assertion

V. Validation and Verification Team

Lead Verifier: Dr. Letty Brown, SCS Global Services, Verification Forester

Dr. Brown holds a Ph.D. in Forest Science from the University of California, Berkeley, where she also completed her Master’s in Range Ecology. Prior to joining SCS, Dr. Brown worked as a Forest Scientist at URS, where she led forest carbon offset project development and management of forest inventory for various clients. In this role she also worked on methodology development with the Verified Carbon Standard, developing methods for crediting wetland conservation projects in their Technical Working Group. Upon receiving her Ph.D. in 2007, Dr. Brown was a Fulbright Scholar and Postdoctoral Researcher in Brazil, designing and implementing remote-sensing and ground-based research to map and designate conservation targets for a portion of the Brazilian Atlantic Forest. Her background also includes forest restoration and ecological analysis, having created habitat conservation plans in California and managed teams of field researchers throughout her career. She is trained as an Arborist, and has extensive experience using GIS software, database software, and statistical software. Dr. Brown has worked on forest carbon projects under the Verified Carbon Standard (VCS), the Climate Action Reserve (CAR), the American Carbon Registry (ACR), and the Climate, Community, and Biodiversity Alliance (CCBA).

Contract Timber Cruiser: Alexa Dugan

Verifier: James Cwiklik, SCS Global Services, Verification Forester

Mr. Cwiklik has an M.F. in Forestry and Ecosystem Management from Michigan Technological University. He completed his undergraduate work at the University of Pittsburgh, receiving a B.A. in Environmental Studies, with a minor in Religious Studies and a certificate in Geographic Information Systems. Previously he has been a Lead Consulting Forester with Davey Tree’s Resource Division supervising a team of

foresters for Pacific Gas and Electric's (PG&E) Community Pipeline Safety Initiative (CPSI) project. Mr. Cwiklik is a certified Arborist and has contributed to the efforts of eradicating the Asian longhorned beetle in southwestern Ohio as an Inventory Arborist and Quality Control Specialist. He has also worked with the Michigan Department of Natural Resources as a Forest Technician Crew Leader to lead forest inventories across northern Michigan with an emphasis on the spread of Emerald Ash Borer and Beech bark disease. Since joining SCS in February 2018, he has conducted multiple site visits under different standards to assist with data collection, analysis, and field training.

Verifier: Michael Hoe, SCS Global Services, Verification Forester

Mr. Hoe has a M.S. in Sustainable Forest Management, with a minor in Forest Biometrics, from Oregon State University, where he also received his B.S. As a Graduate Research Assistant for OSU he organized a field crew and measurement protocol to obtain high quality field data. Previously he served as a Forester with Mason, Bruce, & Girard Inc, assisting with project management, quality control, and timber cruising in the Pacific Northwest and California. Mr. Hoe has also conducted research with the Bureau of Land Management, obtaining data on tree growth and damage through extensive field work. In addition, he has taught Forest Mensuration and plans to publish two papers on quantifying post-fire basal area mortality with multi-temporal LiDAR. Mr. Hoe is a lead verifier with SCS and has conducted several forestry verifications. During his time with SCS, he has proven to be a well-rounded carbon auditor, possessing a full gamut of technical expertise ranging from forest biometrics, growth and yielding modeling, and timber cruising. Mr. Hoe is based in Eugene, Oregon.

Verifier: Francis Eaton, SCS Global Services, Verification Forester

Francis Eaton holds a Masters of Forest Science from the Yale School of Forestry and Environmental Studies and received his B.S. in Forestry from Northern Arizona University, graduating with honors. The focus throughout his studies was forest management with emphases on sampling design and statistical analysis. Mr. Eaton has seven years' experience working as a verification forester and is a lead auditor with SCS Global Services (SCS) in their greenhouse gas verification program. He has experience auditing AFOLU projects under the Verified Carbon Standard (VCS) and Climate, Community, and Biodiversity Alliance (CCBA) standards, as well as Improved Forest Management projects under the standards of the Climate Action Reserve (CAR), The American Carbon Registry (ACR), and the California Air Resources Board (ARB). Prior to working for SCS, Mr. Eaton worked in the southwestern U.S. performing fire risk assessments and writing management plans for private landowners. Mr. Eaton also spent three years working for the Ecological Restoration Institute focusing on restoration of ponderosa pine and grassland ecosystems.

Technical Reviewer: Zane Haxtema, SCS Global Services, Senior Verification Forester, Greenhouse Gas Verification

Mr. Haxtema holds a M.S. in Forest Resources from Oregon State University (Corvallis, Oregon, USA) and a B.S. from The Evergreen State College (Olympia, Washington, USA). A well-rounded forestry professional, Mr. Haxtema held a wide variety of positions in forest research and management before coming to SCS, ranging from work on logging and tree planting crews to experience as a wildland firefighter and research assistant. A specialist in natural resource inventory, Mr. Haxtema holds significant expertise in sampling design, inventory management and growth modelling. Mr. Haxtema is well versed in a wide variety of methodological approaches for carbon accounting, having served as a lead auditor on a wide variety of projects under the Climate Action Reserve, the Verified Carbon

VI. Validation/Verification Process

A. ACR Certification

As the first step in the ACR approval process, ACR screens the Project Plan against the ACR Standard and any relevant sector standard to determine whether the project complies with all applicable requirements. If all requirements are met, ACR certifies the Project Plan. In the case of Hawk Mountain, ACR certified the Project Plan on 11 May 2018, with the issuance of the screening report entitled “BS_Hawk Mtn Project Plan Eligibility Screening 05112018.”

B. Desk Assessment

Following certification of the Project Plan, SCS was engaged to provide the required third-party validation/verification of the project documents and the GHG assertions made therein. The project team provided the Project Plan, Monitoring Report, and additional supporting documentation to and SCS reviewed the materials to assess conformance with the ACR requirements. As the review proceeded, SCS identified items of non-conformance as well as items requiring additional information or clarification. These items were recorded as Findings and delivered to the project team at the same time as Findings developed during the site visit. In addition, the project team’s ex-ante GHG assertion was checked to ensure that the carbon stock quantification was conducted properly without material error, and that algorithms, equations, and default factors used were appropriate and from published sources.

In addition to reviewing the Project Plan, Monitoring Report and other documentation for conformance to the ACR requirements, the audit team performed a risk-based analysis to identify those areas where errors or omissions pose the greatest risk that the GHG assertion might be overstated. Key factors that impact the reported emission reductions/removal enhancements were identified in a sampling plan that informed the Validation/Verification Plan which was created to focus on the critical elements presenting potential risk for errors and material misstatement. The Plan was delivered to the project team prior to the site visit.

C. Site Visit

The Lead Verifier conducted an opening meeting on 16 May 2018 during the site visit. The site visit occurred at the Hawk Mountain Sanctuary in Pennsylvania from 16- 18 May 2018. Site visit activities consisted of an office meeting held at the Sanctuary to meet with members of the project team. Activities conducted in the field included carbon stock re-measurement of a random sample of plots, sufficient to provide a reasonable level of assurance that the GHG assertion provided by the Project is without material discrepancy, per the ACR Standard’s requirements for inventory sampling. In addition, boundary work was conducted and inventory techniques observed to determine that the Project’s measurement and monitoring systems meet ACR requirements.

Verification Sample

Prior to the site visit, the verification team was provided with a complete list of forest inventory plots, both tree-level attributes and plot level carbon values. The verification team used a random sampling strategy to select a >5% sample of inventory plots from the data provided. The resulting

verification sample consisted of 7 plots across all strata (2 extra plots were randomly added to the sample to better capture stocking variability). Using the ACR precision target (+/- 10% of the mean at the 90% confidence level), the verification team compared the verification sample data to the plot level carbon data provided by project personnel using a t-test and confirmed that the project's on site carbon stocks data were reported accurately.

During the site visit, the validation/verification team met with the following individuals in person:

- Cakey Worthington, Senior Manager, Blue Source LLC
- Dr. Laurie Goodrich, Director of Long-Term Monitoring, Hawk Mountain Sanctuary Association
- Sean Grace, Director, Hawk Mountain Sanctuary Association
- Robin Wildermuth, Owner, Woodland Management Services Inc.

In addition, in the course of the assessment, the team met with the following individuals remotely to discuss modeling and spatial elements of the project:

- Carlos Silva, Manager, Forest Carbon Modeling, Blue Source LLC

D. Findings

Throughout the validation/verification, there was an iterative exchange between SCS and the project team to gather additional information for review and examination, and to report instances of non-conformance of the Project to the ACR Requirements. This exchange includes Findings—New Information Requests (NIR) and Non-Conformity Reports (NCR)—that are issued by SCS to the project team. The project team must respond to NIRs and NCRs in order for SCS to render a validation/verification opinion. At this time all Findings have been appropriately addressed by and subsequently closed by SCS.

The Findings from the validation and verification of the Project are compiled in a list of findings and included as Appendix A.

VII. Validation/Verification Activities

SCS audited the Project Plan and Monitoring Report against the requirements of the ACR documents listed in Section VI (D) of this report. Validation under ACR occurs once per crediting period and includes an in-depth assessment of the Project Plan and supporting documentation to determine whether the Project is in conformance with ACR Requirements. Verification occurs once per reporting period, in this case for the reporting period of 17 March 2017 through 16 March 2018. The following sections describe the elements of the Project Plan and Monitoring Report that were examined.

A. Eligibility

- The Project is located on non-federal US forestlands; the project team presented clear land title and offset title for the entire project area.
- The land can be legally harvested by entities owning or controlling the timber rights, and the project area meets the definition of Forestland, in accordance with the IFM methodology's eligibility requirements.

- The Project start date, 17 March 2017, is when the project was submitted to ACR for listing review, which conforms to ACR requirements. The project term of 40 years, and the crediting period of 20 years conform to ACR requirements.
- The ACR Methodology includes additional eligibility requirements, including that the offsets generated by the project be real, additional and permanent, which the project meets.

In summary, the audit team found the Project Plan and Monitoring Report to be in conformance with applicable eligibility conditions.

B. Location and Boundaries

The Project Plan includes GPS coordinates for the project area. The project team provided GIS files of project area boundaries which the audit team converted to kmz format for display in Google Earth. During the site visit, the audit team visited boundaries and recorded waypoints at strategic locations, and confirmed that the records corroborate the project area boundaries provided by the Proponent. In addition, non-forested acres (e.g. facilities, roads, talus areas) within the project area were removed from the project boundary to a minimum mapping unit of 2.5 acres. These features were appropriately excluded from the project area as confirmed both in the field and during desk review.

C. Land Title and Ownership of Offset Credits

The project team provided a list of land owner, parcel tax numbers, and deed information (scanned deeds and titles), as well as a history of the land beginning in 1934. The validation/verification team examined the submitted information and performed ownership checks with the County Recorder and Assessor offices (Berk and Schuylkill counties) by phone and through online databases. The team was able to confirm that the Project Proponent, Hawk Mountain Sanctuary Association, is the owner in fee of the project area, therefore meeting ACR Requirements for land title. For ownership of offset credits, the validation/verification team examined the Project Proponent's signed attestation of Offset Title.

D. Start Date

The validation/verification team was able to confirm that the project's start date, listed as 17 March 2017, is the date when the project was submitted to ACR for listing review on the ACR website, which conforms to ACR requirements. As the ACR defines the start date as the date on which the project began to reduce GHG emissions against its baseline, and, for AFOLU activities, that these activities occurred specifically on project lands, the project meets the ACR Requirements.

E. Project Activities

The Project Plan describes the project activities which consist of growing the forest with no commercial harvesting. These activities are codified contractually by the conservation easement and the carbon offset project documents. The description of activities in the Project Plan is in conformance with the ACR Requirements.

F. GHG Sources, Sinks, and Reservoirs

The Project Plan identifies the GHG sources and sinks within the project boundaries. Above and below ground live tree biomass are monitored as well as dead standing wood and harvested wood products. In addition, methane due to burning is an included pool, per the Methodology requirements. These provisions conform to ACR Requirements.

G. Baseline Scenario and Additionality

In accordance with the IFM Methodology, projects must apply a three-prong additionality test to demonstrate that they exceed currently effective and enforced laws and regulations, exceed common practice in the forestry sector and geographic region and face a financial implementation barrier. The validation/verification team was able to confirm these statements and that the project team conducted the proper additionality analysis and conformed to the additionality requirements of the Methodology. In addition, the Project Proponent signed an attestation of full regulatory compliance.

The validation/verification team confirmed that the project baseline as the continuance of an aggressive harvesting regime, is appropriate for the region and is in compliance with the Methodology.

H. Permanence

A non-permanence risk rating analysis is provided in Section B8 of the Project Plan. The project team performed the analysis of risk by applying the ACR Tool for Risk Analysis and Buffer Determination. The validation/verification team reviewed the assessment and found that it adequately addresses potential causes of unintentional reversals including tree death from wildfire, disease, drought, or wind. The information was appropriately incorporated into the quantification of credits, and reported in the Project Plan and Monitoring Report.

ACR's evaluation of the use of the tool and acceptance of the proposed 19 percent buffer contribution is described in the document "BS_Hawk Mtn Project Plan Eligibility Screening 05112018." In addition, the Project Proponent committed to a 40-year agreement with ACR, the signed and countersigned contract which was provided to the validation/verification team.

The audit team determined that the risk assessment was conducted correctly in accordance with relevant ACR Requirements.

I. Quantification of Carbon Stock Changes

The validation/verification team's quantitative review included an assessment of the primary quantitative data used to assess carbon pools accounted for by the project for both baseline and project scenarios. The Project's carbon pools were evaluated including above and belowground biomass, standing deadwood, and harvested wood products. The team performed a check of all the project quantification worksheets and model inputs including allometric equations for calculating tree biomass, Forest Vegetation Simulation (FVS) inputs, and values used in both ex ante and ex post baseline and project scenarios. Once inputs were verified, the FVS models were rerun and the calculation of ERTs checked. To derive the carbon values for the reporting period of 17 March 2017

through 16 March 2018, the project used live tree carbon stocks from the forest inventory conducted in April 2017.

To derive the with-project scenario, the inventory was projected ahead to the end date of the monitoring period (March 16, 2018), and degrown by one month to the project start date (March 17, 2017) the start date of the monitoring period. The validation/verification team ran the FVS model to confirm all calculations were conducted appropriately.

Carbon in standing dead wood was estimated using the FVS Fire and Fuels Extension (FFE) with the Jenkins equations, with deductions taken for standing dead per decay classes recorded in the field. Decay classes were recorded in the field with a slightly different classification as that listed in the Methodology, and decay classes were translated to the most closely corresponding Methodology-defined class. Additionally, for all standing dead wood with methodology decay class 4 (i.e. 4 or 5 as recorded in the field), only stem wood was included in carbon calculations. The verification team confirms that the calculations were conducted appropriately and free of material error.

In summary, all of the above calculation methods are in conformance with the ACR Requirements.

J. Ex-Ante Offset Projection

The Project Plan section A7 includes a list of ex-ante offset projections by year for the first crediting period of 20 years (including GHG removal from long-term wood products) based on growth projections generated using the FVS model. Ex-ante estimation methods are described in section E6 and are in conformance with the Methodology's ex-ante estimation methods.

K. Data Management and QA/QC

The project's collection and management of monitoring plot data, check cruises, and maintaining QA/QC procedures for forest inventory SOPs, including field data collection, data management, and recordkeeping are detailed in the Project Plan and referenced in the Monitoring Report. The validation/verification team finds the risk of material misstatement in the area of data management and QA/QC to be low.

L. Uncertainty

The Project Plan section E4 describes how ex-post uncertainty is accounted for and quantified per the Methodology requirements. The validation/verification team checked the calculations, and that uncertainty was used appropriately in the Monitoring Report calculations, and confirms that the uncertainty analysis was conducted in accordance with the ACR requirements.

M. Leakage

The Project Plan describes that leakage analysis was limited to market leakage. Market leakage was based upon the difference between the project scenario harvested wood products volume and the baseline scenario harvested wood products volume. The Methodology allows no activity-shifting leakage beyond de minimis levels through activity shifting to other lands owned, or under management control, by the timber rights owner. As the Project Proponent does not commercially

harvest timber and nearly all forestlands owned by the Project Proponent are included in the project, activity shifting leakage was not accounted for. The validation/verification team found the Project's approach to leakage to be reasonable and in conformance with ACR's requirements.

N. Community and Environmental Impacts

The audit team confirms that the Proponent has evaluated community and environmental impacts and found no negative impacts from the improved forest management project. The project helps conserve the project areas as a community resource for education, research and recreation, as outlined in Section A5 of the Project Plan.

O. Verification Data:

The data and information supporting the GHG assertion for the first reporting period of March 17, 2017 through March 16, 2018 are reported in the Monitoring Report. The ERTs for the reporting period are projected using the FVS growth and yield model for both the baseline and project scenario, as described in Section I Quantification of this report.

The ERT's associated with the first reporting period are reported in the Monitoring Report and are verified by the validation/verification team as follows: 47,996 tCO₂e (without risk buffer deduction). With the 19% risk buffer deduction of 9,119 tCO₂e, the amount is 38,876 tCO₂e.

The validation/verification team confirmed that the Monitoring Report conforms to the requirements of the ACR Standard, the ACR Forest Carbon Project Standard, the ACR Validation and Verification Guidelines, and *the Improved Forest Management (IFM) Methodology for Quantifying GHG Removals and Emission Reductions through Increased Forest Carbon Sequestration on Non-Federal U.S. Forestlands v. 1.3*.

VIII. Validation and Verification Opinion

The SCS validation/verification team performed the assessment according to the validation specifications described in Section IV of this report. The team was able to confirm that:

- The Project Plan conforms to the requirements of the ACR Standard, the ACR Validation and Verification Standard, and the ACR-approved *Improved Forest Management (IFM) Methodology for Quantifying GHG Removals and Emission Reductions through Increased Forest Carbon Sequestration on Non-Federal U.S. Forestlands v. 1.3*;
- The procedures followed for determination of the baseline scenario and additionality conform to ACR's standards and the requirements of the methodology;
- The procedures followed to quantify the ex-ante estimate of net GHG removal enhancements and to perform the non-permanence risk assessment conform to ACR's requirements; and
- The procedures and methodologies laid out in the Project Plan with respect to monitoring and quantification of project net GHG removal enhancements conform to ACR's requirements.

For verification, the level of assurance and objectives, scope and criteria of the verification are described in Section IV of this report. Through verification activities, the SCS assessment team was able to confirm that:

- The Monitoring Report conforms to the requirements of the ACR Standard, the ACR Validation and Verification Standard, and the *Improved Forest Management (IFM) Methodology for Quantifying GHG Removals and Emission Reductions through Increased Forest Carbon Sequestration on Non-Federal U.S. Forestlands v. 1.3*;
- The data and information supporting the GHG assertion were projected appropriately into the future through use of modeling;
- The actual number of ERTs, 47,996 tCO₂e associated with the Monitoring Report has been verified. The amount including the 19% risk buffer deduction is 38,876 tCO₂e.

Through the validation and verification assessment, SCS has determined that the Bluesource – Hawk Mountain Improved Forest Management Project, developed by Bluesource LLC, is in conformance with the American Carbon Registry Standard, the ACR Validation and Verification Standard, and the ACR Methodology for *Improved Forest Management (IFM) for Quantifying GHG Removals and Emission Reductions through Increased Forest Carbon Sequestration on Non-Federal U.S. Forestlands* (Version 1.3). Furthermore, all issues identified during the validation and verification assessment were resolved and found to be in conformance with ACR Requirements. The Project Plan and Monitoring Report are considered accurate, complete, transparent, and free of material misstatements. Whereas, some discrepancies exist between the project reporting and the verification calculations, the discrepancies do not violate the 5.00 percent materiality threshold. The overall aggregation of errors and omissions is 0.00%. Therefore, SCS can issue a qualified positive Validation and Verification Opinion.



Dr. Letty B. Brown, Lead Verifier

8 November 2018

Date



Zane Haxtema, Technical Reviewer

8 November 2018

Date

Appendix A: List of Findings

The following is a complete list of findings issued and resolved during this assessment. All project responses are verbatim and have not been altered for this report.

Reporting Period: Initial Reporting Period- March 17, 2017 to March 16, 2018

NCR 1 Dated 1 Jun 2018

Standard Reference:

Document Reference: HawkMountain_GHGPlan_05_18_18_v2.pdf

Finding: Section A7 of the GHG plan states "Total projected GHG removal is 221,251 mtCO₂e (without risk buffer deduction) over the first crediting period of 20 years (including GHG removal from long-term wood products). Table A7.1 lists the estimates of GHG emissions reductions per year. However, Table A7.1 emissions by year do not total to 221,251, but to 225,995 mtCo₂e instead.

Project Personnel Response: The total has been corrected to 225,996 in Section A7 of the GHG Plan.

Auditor Response: The audit team confirmed that the number has been corrected in Section A7, as stated in the revised GHG Plan "HawkMountain_GHG Plan_6_4_18_V3".

Bearing on Material Misstatement or Conformance (M/C/NA): M

NIR 2 Dated 1 Jun 2018

Standard Reference:

Document Reference: HawkMountain_GHGPlan_05_18_18_v2.pdf; Acr-template-for-ghg-project-plans.doc

Finding: Section A8 of the referenced template states "List full contact information, roles, and responsibilities for project proponent, other project participants, relevant regulator(s) and/or administrators of any GHG Program(s) in which the project is already enrolled, and the entities holding offset and land title (if applicable)." Section A8 of the project's GHG Plan currently does not list the entities holding offset and land title.

Project Personnel Response: The GHG plan has been updated to clarify Hawk Mountain at the landowner and title holder.

Auditor Response: Section A8 in the revised GHG Plan "HawkMountain_GHG Plan_6_4_18_V3" now lists the Roles and Responsibilities of the Project Proponent as "financing and implementation of long-term project management, landowner and title holder". However, it does not list who the offset title holder is.

Project Personnel Response 2: The GHG Plan has been updated accordingly: "HawkMountain_GHGPlan_6_29_18_V4".

Auditor Response 2: The audit team confirms that the GHG Plan has been revised (revised doc: "HawkMountain_GHGPlan_06_29_18_V4") as stated and the holder of offset title is now clarified. The finding is closed.

Bearing on Material Misstatement or Conformance (M/C/NA): C

NCR 3 Dated 1 Jun 2018**Standard Reference:**

Document Reference: HawkMountain_GHGPlan_05_18_18_v2.pdf; Acr-template-for-ghg-project-plans.doc

Finding: The project's title is inconsistently listed in the GHG Plan. On the ACR public registry, and on the title page of the GHG Plan, the project title is listed as the "Bluesource--Hawk Mountain Improved Forest Management Project". However, within the GHG Plan document, it is often listed as the "Blue Source - Hawk Mountain Sanctuary Association Improved Forest Management Project".

Project Personnel Response: The project title is Blue Source - Hawk Mountain Improved Forest Management Project and the title has been corrected throughout the GHG Plan.

Auditor Response: The audit team confirmed that the title of the project has been consistently listed as the 'Blue Source-Hawk Mountain Improved Forest Management Project', in the GHG Plan: "HawkMountain_GHG Plan_6_4_18_V3". The finding is closed.

Bearing on Material Misstatement or Conformance (M/C/NA): C

NIR 4 Dated 1 Jun 2018

Standard Reference: The American Carbon Registry Improved Forest Management Methodology for Quantifying GHG Removals and Emission Reductions through Increased Forest Carbon Sequestration on Non Federal US Forestlands V 1.3

Document Reference: HawkMountain_GHGPlan_05_18_18_v2.pdf

Finding: Section B2 of the referenced applied methodology states "The Project Proponent must provide a detailed description of the geographic boundary of project activities.... Information to delineate the project boundary must include: • Project area delineated on USGS topographic map • General location map • Property parcel map". While the GHG Plan includes a map showing the project area delineated on a USGS topographic map, as well as a general location map, a property parcel map is missing at present.

Project Personnel Response: Section A4. of the GHG Plan has been updated with an ownership map or the parcels deeds to Hawk Mountain Sanctuary Association.

Auditor Response: The audit team confirmed that the revised GHG Plan , "HawkMountain_GHG Plan_6_4_18_V3", contains an ownership map, Figure A-6, which shows the parcels owned by the Hawk Mountain Sanctuary Association in Berks and Schuylkill counties and relative to the project area. The finding is closed.

Bearing on Material Misstatement or Conformance (M/C/NA): C

NIR 5 Dated 1 Jun 2018**Standard Reference:****Document Reference:** HawkMountain_GHGPlan_05_18_18_v2.pdf

Finding: The GHG Plan, Section H2 of the project timeline references as proof of the Project Start Date, "CDMA contract signing". Please submit the CDMA contract to the audit team. In addition, Section G1.2 of the GHG Project Plan states "Emission reduction rights are owned by the Project Proponent." Please provide evidence of the statement made in Section G1.2.

Project Personnel Response: The project start date was actually conferred on the date of listing on the American Carbon Registry APX website, not the signing of the CDMA. Section H has been updated to reflect this change.

Auditor Response: The revised GHG Plan, "HawkMountain_GHG Plan_6_4_18_V3", Section H2, under "Project Start Date", now lists in the Sources/Notes column, "Date of Listing". The ACR Standard v 5.0. Appendix A, states "For IFM, the Start Date may be denoted by one of the following: 1. The date that the Project Proponent began to apply the land management regime to increase carbon stocks and/or reduce emissions relative to the baseline. 2. The date that the Project Proponent initiated a forest carbon inventory. 3. The date that the Project Proponent entered into a contractual relationship to implement a carbon project. 4. The date the project was submitted to ACR for listing review. Other dates may be approved by ACR on a case by case basis."

Given that the project has chosen as the Project Start Date the date of listing, referring to the date of submittal of the project's listing documents to the ACR, this corresponds with the allowable start date reason cited in #4 above. Therefore, the justification for the Project Start Date is in compliance with the ACR Standard. The audit team confirmed on the ACR's apx registry that the project was submitted to ACR for listing review on March 17, 2017.

In addition, the finding requested evidence that the Project Proponent holds the Emission Reduction Rights for the project, as is stated in Section G1.2 of the GHG Project Plan. The project team submitted the following attestation as evidence that the Project Proponent holds undisputed title to the offset rights originating from the project. The attestation

"Hawk_OffsetsTitle_Attestation_5_21_2018_signed.pdf", states as follows: "The undersigned, Sean Grace, being President of Hawk Mountain Sanctuary Association, hereby attests that Hawk Mountain Sanctuary Association holds, free of any lien, charge, security interest or other encumbrance, legal title to and all ownership rights to any removal, limitation, reduction, avoidance, sequestration or mitigation of any greenhouse gas associated with the Blue Source- Hawk Mountain Improved Management Project . " The attestation is signed by Sean Grace and date 05/23/2018. The finding is closed.

Bearing on Material Misstatement or Conformance (M/C/NA): C

NIR 6 Dated 15 May 2018

Standard Reference: The American Carbon Registry Improved Forest Management Methodology for Quantifying GHG Removals and Emission Reductions through Increased Forest Carbon Sequestration on Non-Federal US Forestlands V 1.3

Document Reference: HawkMountain_Start_RP_CO2_5_4_18.xlsx

Finding: Errata 1.2 Clarifications: October 2017 states: "To ensure accuracy and conservative estimation of the mean aboveground live biomass per unit area within the Project Area, Projects that have not started verification at the time this erratum is published must account for missing cull in both the ex-ante and ex post baseline and project scenarios. Missing cull deductions should be determined using cull attribute data collected during field measurement of sample plots. Missing cull deductions may be conservatively estimated based on ecologically relevant and regionally specific data only if cull attribute data were not collected in field inventories conducted prior to this erratum. If standing dead biomass is included as a pool, biomass estimates must reflect decay." While the methodology and workbooks clearly indicate that tree defect was recorded (missing/cull), the reported net carbon values do not appear to be quantified correctly. In addition, the GHG plan lacks a complete description of how defect is used during the quantification of carbon. Please clarify how reductions in carbon by tree were applied using the recorded percent defect by tree. Please update the GHG plan with improved descriptions of the application of defect.

Project Personnel Response: n/a

Auditor Response: The finding has been resolved outside the cover of the findings presentation worksheet. The calculation worksheets and GHG plan were revised. The finding is closed.

Bearing on Material Misstatement or Conformance (M/C/NA): M

NIR 7 Dated 2 Jul 2018

Standard Reference: The American Carbon Registry Improved Forest Management Methodology for Quantifying GHG Removals and Emission Reductions through Increased Forest Carbon Sequestration on Non-Federal US Forestlands V 1.3

Document Reference: HawkMountain_GHG Plan_6_4_18_V3

Finding: An error was identified within the Table of Contents in the current GHG plan dated 4 June 2018 where items under Section E. Quantification, do not have an applicable page number referenced. Please update accordingly.

Project Personnel Response: The updated HawkMountain_GHGPlan_7_9_18 has page numbers in the table of contents for all sub-sections of the E. Quantification section.

Auditor Response: The audit team checked the revised GHG Plan, "HawkMountain_RP_ERT_HWP_7_9_18.pdf" and confirmed that the page numbers in the table of contents for all subsections of the Quantitative Section (Section E) are correctly included.

Bearing on Material Misstatement or Conformance (M/C/NA): NA

NCR 8 Dated 2 Jul 2018

Standard Reference: The American Carbon Registry Improved Forest Management Methodology for Quantifying GHG Removals and Emission Reductions through Increased Forest Carbon Sequestration on Non-Federal US Forestlands V 1.3

Document Reference: HawkMountain_GHG Plan_5_18_18_V2.pdf,
HawkMountain_RP_ERT_HWP_5_17_18.xlsx

Finding: Chapter B, section B5 states "Project Proponents must conduct their risk assessment using the ACR Tool for Risk Analysis and Buffer Determination or, until release of this tool, the VCS Tool for AFOLU Non-Permanence Risk Analysis and Buffer Determination. The output of either tool is an overall risk category, expressed as a fraction, for the project translating into the buffer deduction that must be applied in the calculation of net ERTs (section G1). This deduction must be applied unless the Project Proponent uses another ACR-approved risk mitigation product."

The buffer deduction is listed as 15% in the GHG plan, however, during the ERT calculations in workbook "HawkMountain_RP_ERT_HWP_5_17_18", the Buffer (BUF) is set to 0 (Cell D5, worksheet 'ACR_IFM_ERT_Calcs'). Therefore, the current quantification of ERTs is not in conformance with the methodology.

Project Personnel Response: The Buffer in HawkMountain_RP_ERT_HWP_7_9_18 is now set to 0.15 as computed in the GHG Plan.

Auditor Response: Upon issuance of this finding, the client provided a new, updated ERT workbook ("HawkMountain_RP_ERT_HWP_7_9_18") which correctly included a value of 15% in cell D5 in worksheet "ACR_IFM_ERT_Calcs". Therefore, this finding has been resolved.

Bearing on Material Misstatement or Conformance (M/C/NA): C

NCR 9 Dated 2 Jul 2018

Standard Reference: The American Carbon Registry Improved Forest Management Methodology for Quantifying GHG Removals and Emission Reductions through Increased Forest Carbon Sequestration on Non-Federal US Forestlands V 1.3

Document Reference: HawkMountain_Start_RP_CO2_5_21_18.xlsx, HawkMountain_100Yr_Calcs_5_17_18.xlsx, HawkMountain_RP_ERT_HWP_5_17_18.xlsx, HawkMountain_GHG Plan_5_18_18_V2.pdf

Finding: Chapter C, section C3, Equation 5 defines how to quantify the long-term average baseline stocking level for the Crediting period. Cell H4 in worksheet "ACR_IFM_ERT_Calcs" within workbook "HawkMountain_RP_ERT_HWP_5_17_18" reports a value of 145,428. However, the formula: =SUM(D10:W11)/20+Baseline_HWP_Step_4_5!\$C\$37, references cell C37 in the baseline wood products worksheet resulting in a value of zero. Thus, the quantification of the long-term average baseline stocking level for the Crediting period is out of conformance with the approved methodology as it does not currently include the twenty-year average value of annual carbon remaining stored in wood products 100 years after harvest (in metric tons of CO2).

Project Personnel Response: In HawkMountain_RP_ERT_HWP_7_9_18.xlsx, the cell has been corrected to reference Baseline_HWP_Step_4_5!\$B38\$, the 20-yr average CO2 in wood products. The correction, however, had no effect on the ERTs calculated because the incorrect cell was not referenced in the subsequent calculations.

Auditor Response: Upon issuance of this finding, the client corrected the quantification of the long-term average baseline stocking level by including the twenty-year average value of annual carbon remaining stored in wood products for 100 years after harvest as required. Therefore, this finding has been resolved.

Bearing on Material Misstatement or Conformance (M/C/NA): M

NCR 10 Dated 2 Jul 2018

Standard Reference: The American Carbon Registry Improved Forest Management Methodology for Quantifying GHG Removals and Emission Reductions through Increased Forest Carbon Sequestration on Non-Federal US Forestlands V 1.3

Document Reference: HawkMountain_Start_RP_CO2_5_21_18.xlsx, HawkMountain_100Yr_Calcs_5_17_18.xlsx, HawkMountain_RP_ERT_HWP_5_17_18.xlsx, HawkMountain_GHG Plan_5_18_18_V2.pdf

Finding: Section 3.1.2 of the approved methodology states that "below-ground dead wood is conservatively neglected" when quantifying carbon in dead wood. As the current workbook still estimates dead carbon stocks, it is not in conformance with the requirements.

Project Personnel Response: The project and baseline standing dead now only include aboveground carbon and match between both scenarios in all three worksheets:

HawkMountain_Start_RP_CO2_7_9_18, HawkMountain_100Yr_Calcs_7_9_18, HawkMountain_RP_ERT_HWP_7_9_18.

Auditor Response: Upon issuance of this finding, the client corrected the quantification of dead carbon stocks by removing belowground dead carbon stocks. In addition, the start date values for all carbon pools are now consistent between all workbooks. Therefore, this finding has been resolved.

Bearing on Material Misstatement or Conformance (M/C/NA): M

NCR 11 Dated 2 Jul 2018

Standard Reference: The American Carbon Registry Improved Forest Management Methodology for Quantifying GHG Removals and Emission Reductions through Increased Forest Carbon Sequestration on Non-Federal US Forestlands V 1.3

Document Reference: HawkMountain_Start_RP_CO2_5_21_18.xlsx,
HawkMountain_100Yr_Calcs_5_17_18.xlsx, HawkMountain_RP_ERT_HWP_5_17_18.xlsx,
HawkMountain_GHG Plan_5_18_18_V2.pdf

Finding: During the review of the calculation workbooks an inconsistency was identified between standing dead carbon stocks in the year 2016 for the project and baseline scenarios. As both scenarios begin in 2016 with the same inventory data, the value should be the same. Please update the standing dead calculation for the year 2016 to be consistent between the baseline and project scenario.

Project Personnel Response: The project and baseline standing dead now only include aboveground carbon and match between both scenarios in all three worksheets:

HawkMountain_Start_RP_CO2_7_9_18, HawkMountain_100Yr_Calcs_7_9_18,
HawkMountain_RP_ERT_HWP_7_9_18.

Auditor Response: Upon issuance of this finding, the client corrected the quantification of dead carbon stocks by removing belowground dead carbon stocks. In addition, the start date values for all carbon pools are now consistent between all workbooks. Therefore, this finding has been resolved.

Bearing on Material Misstatement or Conformance (M/C/NA): M

NCR 12 Dated 2 Jul 2018

Standard Reference: The American Carbon Registry Improved Forest Management Methodology for Quantifying GHG Removals and Emission Reductions through Increased Forest Carbon Sequestration on Non-Federal US Forestlands V 1.3

Document Reference: HawkMountain_RP_ERT_HWP_6_19_18_vintageBreakdown

Finding: During the review of the ERT workbook, an error was identified in row 15, Year T, where some values are set to equal 1 resulting in the incorrect quantification of deltaC baseline (row 23). Please correct the error and provide an updated workbook.

Project Personnel Response: Year T indicates the year when the projected stocking level reaches the long term average. As required by the protocol, in year T and all subsequent years "the long-term average stocking level is used in the baseline stock change calculation for the entire Project Period." Row 15 in the ERT workbook = 1 if year T has been reached. Whereas this indicator returned to 0 in the previous workbook, the updated workbook now uses the long-term average stocking level in all years after year T (i.e., Row 15 = 1 for entire Project period once year T has been reached).

Auditor Response: Upon issuance of this finding, the client provided information on the function of said row in determining when the long-term average baseline stocking level has been reached. The methodology states "Annual projected stocking levels are used for the baseline stock change calculation until the projected stocking level reaches the long term average (time t = T). Thereafter, the long-term average stocking level is used in the baseline stock change calculation for the entire Project Period." Therefore, the client is in compliance and this finding has been closed.

Bearing on Material Misstatement or Conformance (M/C/NA): M

NCR 13 Dated 2 Jul 2018

Standard Reference: The American Carbon Registry Improved Forest Management Methodology for Quantifying GHG Removals and Emission Reductions through Increased Forest Carbon Sequestration on Non-Federal US Forestlands V 1.3

Document Reference: HawkMountain_100Yr_Calcs_5_17_18.xlsx, HawkMountain_RP_ERT_HWP_5_17_18.xlsx, HawkMountain_GHG Plan_5_18_18_V2.pdf

Finding: During the review of the 100Yr Calcs workbook, an error was identified in the quantification of average carbon stored in wood products. The methodology states to sum the total amounts harvested over the 20 year period then divide by 20 to obtain the yearly average. The current quantification uses an Excel formula, "AVERAGE()", and only selects 3 cells resulting in the sum being divided by 3 rather than 20. Please update the average baseline wood products values accordingly as they are currently incorrect.

Project Personnel Response: The updated workbook HawkMountain_100Yr_Calcs_7_9_18 now divides the 20-yr sum of harvested wood products by 20 years, as required by the protocol.

Auditor Response: Upon issuance of this finding, the client updated the quantification of the 20 year average carbon stocks stored in wood products by partitioning annual average harvests across the 20 year period and applied an average across all 20 years. The methods used to partition the harvests assume that the FVS harvest outputs will occur on an annual basis, rather than in a one-year harvest event. As the logic is sound and the value now represents a twenty year average, the client is in compliance, and this finding has been resolved.

Bearing on Material Misstatement or Conformance (M/C/NA): M

NCR 14 Dated 13 Sep 2018

Standard Reference: The American Carbon Registry Improved Forest Management Methodology for Quantifying GHG Removals and Emission Reductions through Increased Forest Carbon Sequestration on Non-Federal US Forestlands V 1.3

Document Reference: "HawkMountain_RP_ERT_HWP_7_9_18.xls",
"HawkMountain_Start_RP_CO2_7_9_18"

Finding: Equation 10 of the ACR methodology defines how the percentage uncertainty in the combined carbon stocks in the baseline (UNCBSL) is estimated. During the review of the uncertainty calculation used within workbook "HawkMountain_RP_ERT_HWP_7_9_18.xls" and "HawkMountain_Start_RP_CO2_7_9_18", a non-conformity was identified in the estimation of UNCBSL where the client omitted the twenty-year baseline average value of annual carbon remaining stored in wood products for 100 years after harvest ($\bar{C}_{BSL,HWP}$). As the quantification of UNCBSL is defined as the square root of the summed errors in each of the measurement pools, with $\bar{C}_{BSL,HWP}$ as one of those pools, it must be included. Please update the quantification of UNCBSL within the above workbooks to comply with the ACR methodology.

Equation 18 of the ACR methodology defines how the percentage uncertainty in the combined carbon stocks in the project year t ($UNCP,t$) is estimated. During the review of the uncertainty calculation used within workbook "HawkMountain_RP_ERT_HWP_7_9_18.xls", the estimation of $UNCP,t$ was not complete. As the quantification of $UNCP,t$ is defined as the square root of the summed errors in each of the measurement pools, with $\bar{C}_{BSL,HWP}$, $CP,Tree,t$, and $CP,Dead,t$ as those pools, it must be included. Please update the workbook "HawkMountain_RP_ERT_HWP_7_9_18.xls" to include the quantification of $UNCP,t$ to comply with the ACR methodology.

Equation 19 of the ACR methodology defines how the total project uncertainty in year t (UN_{Ct}) is estimated. During the review of the uncertainty calculation used within workbook "HawkMountain_RP_ERT_HWP_7_9_18.xls", a non-conformity was identified in the estimation of UN_{Ct} where the client applied the UNCBSL to the change in the project carbon stocks ($\Delta CP,t$) during quantification. Whereas, equation 19 states that $UNCP,t$ needs to be applied to the $\Delta CP,t$ during estimation. Please update the workbook "HawkMountain_RP_ERT_HWP_7_9_18.xls" to correctly quantify UN_{Ct} to comply with the ACR methodology.

Project Personnel Response: EQUATION 10

The uncertainty equations in HawkMountain_RP_ERT_HWP_09_19_18.xlsx have been corrected so that they conform with Equations 10, 18, and 19 of the ACR protocol. Uncertainty in combined baseline CO₂e stocks (Equation 10) is calculated in row 25 of the "ACR_IFM_ERT_Calcs" tab. The baseline uncertainty calculation (UNCBSL) now includes all required pools: live CO₂e in year 1 (CBSL,TREE,1), dead CO₂e in year 1 (CBSL,DEAD,1), 20-yr average CO₂e in wood products (CBSL,HWP), and 20-yr average baseline GHG emissions (GHGBSL). The uncertainties in live and dead CO₂e (eBSL,TREE and eBSL,DEAD), which are shown in rows 2 and 3, are calculated in the "Stats_StartDate" tab of HawkMountain_Start_RP_CO₂_09_19_18.xlsx.

EQUATION 18

Uncertainty in combined project CO₂e stocks (Equation 18) is calculated in row 26 of the "ACR_IFM_ERT_Calcs" tab. The project uncertainty calculation (UNCP,t) now includes all required pools: live CO₂e in year t (CP,TREE,t), dead CO₂e in year t (CP,DEAD,t), CO₂e in wood products in year t (CP,HWP,t), and project GHG emissions in year t (GHGP,t). The protocol specifies that uncertainties in live and dead CO₂e (eP,TREE and eP,DEAD) should be estimated from "the last remeasurement of the inventory prior to year t." As the project is in the first reporting period, the most recent inventory is the start date inventory (year 1). Therefore, eP,TREE and eP,DEAD equal eBSL,TREE and eBSL,DEAD, which are shown in rows 2 and 3 of the "ACR_IFM_ERT_Calcs" tab in HawkMountain_RP_ERT_HWP_09_19_18.xlsx.

EQUATION 19

Total project uncertainty (Equation 19) is calculated in row 27 of the "ACR_IFM_ERT_Calcs" tab. The total uncertainty calculation (UNCT) now applies the baseline uncertainty (UNCBSL) to the change in baseline CO₂e (Δ CBSL,t) and the project uncertainty (UNCP,t) to the change in project CO₂e (Δ CP,t).

Auditor Response: The audit team reviewed the revised calculations worksheets

"HawkMountain_RP_ERT_HWP_09_19_18.xlsx" and "HawkMountain_Start_RP_CO₂_09_19_18.xlsx" and confirmed that the project calculations were revised to conform with equations 10, 18 and 19 of the selected ACR methodology as identified within this finding. The audit team confirmed that the baseline uncertainty calculation now includes all required pools. The audit team confirmed that the project uncertainty calculation now includes all required pools.

Bearing on Material Misstatement or Conformance (M/C/NA): M

NCR 15 Dated 21 Sep 2018

Standard Reference: ACR Standard 5.0; The American Carbon Registry Improved Forest Management Methodology for Quantifying GHG Removals and Emission Reductions through Increased Forest Carbon Sequestration on Non Federal US Forestlands V 1.3

Document Reference: HawkMountain_RP_ERT_HWP_09_19_18

Finding: Equation 19 of the ACR methodology defines how to quantify the Total Project Uncertainty (UNCt). During the review of the workbook "HawkMountain_RP_ERT_HWP_09_19_18" an error was identified in the quantification of UNCt where the absolute value is being taken for the change in the baseline carbon stocks (ΔBSL_t) and the change in the project carbon stocks (ΔCP_t). While this has no effect in the numerator due to the values being squared, it does have an effect in the denominator resulting in a noticeable difference in the UNCt value. As the defined equation does not take the absolute value on any parameter, the current estimation of UNCt is not in conformance and will need to be updated to comply with the ACR methodology.

Project Personnel Response: The absolute value operators have been removed from the calculation of total project certainty in "HawkMountain_RP_ERT_HWP_09_21_18."

Auditor Response: Upon issuance of this finding, the client updated the quantification of UNCt following the requirements of the ACR methodology. Therefore, this finding has been closed.

Bearing on Material Misstatement or Conformance (M/C/NA): C

NCR 16 Dated 21 Sep 2018

Standard Reference: ACR standard 5.0; The American Carbon Registry Improved Forest Management Methodology for Quantifying GHG Removals and Emission Reductions through Increased Forest Carbon Sequestration on Non Federal US Forestlands V 1.3

Document Reference: HawkMountain_RP_ERT_HWP_09_19_18

Finding: Equation 20 of the ACR methodology defines how to quantify the annual net greenhouse gas emissions reductions at time t. During the review of the quantification of said parameter within workbook "HawkMountain_RP_ERT_HWP_09_19_18", an error was identified in the formula(s) in row 38, equation 20, of worksheet "ACR_IFM_ERT_Calcs", where the 15.0% risk buffer value (BUF) was not referenced in correctly. Instead, cell D3 is selected which represents the uncertainty in dead CO2 stocks in year 1. Please update the above quantification to include the BUF value as part of the quantification of CACR_t as required.

Project Personnel Response: The reference to the buffer cell has been corrected to cell D5 in "HawkMountain_RP_ERT_HWP_09_21_18"

Auditor Response: Upon issuance of this finding the client updated the workbook "HawkMountain_RP_ERT_HWP_..." to correctly reference in the BUF value during the quantification of CACR_t . Therefore, this finding has been resolved.

Bearing on Material Misstatement or Conformance (M/C/NA): M