VCS PROJECT REVIEW REPORT

Project ID	*PL1718*
Project Name	*Inner Mongolia Keyihe IFM (conversion of logged to protected forest) Project*
Project Proponent	*Inner Mongolia Keyihe Forest Industry LLC* *Beijing Shengdahuitong Carbon Management Co., Ltd.*
Methodology	*VM0010, Methodology for Improved Forest Management: Conversion of Logged to Protected Forest, version 1.3*
Sectoral Scope(s)	*14. Agriculture, forestry and other land use*
Validation/Verification Body (VVB)	*China Environmental United Certification Centre Co., Ltd. (CEC)*
Registry	*Markit*

Assessment Criteria	*VCS Standard*, v3.7; *VM0010 Methodology for Improved Forest Management: Conversion from Logged to Protected Forest*, v1.3
Date of First Issue	04 April 2018
Date of Second Issue	07 May 2018
Date of Final Issue	05 July 2018

Summary:

An accuracy review of the *Inner Mongolia Keyihe IFM (conversion of logged to protected forest) Project* registration and issuance request has been conducted by VCS in accordance with Section 4.3 of the *Registration and Issuance Process*.

The accuracy review has raised 10 assessment findings and no minor findings, detailed below. The VVB, in coordination with the project proponent, is hereby required to provide a response to the assessment findings presented in Section 1. The 10 assessment findings must be addressed to the satisfaction of VCS.

This findings report may be made publically available. Confidential information may be provided as separate attachments.

1 ASSESSMENT FINDINGS

Finding 1

Section 3.19 of the *VCS Standard* requires that project proponents produce a project description using the *VCS Project Description Template* and adhere to all instructional text within the template.

Section 1.10 of the *Project Description Template*, v3.3, requires the project proponent to describe the present and prior environmental conditions of the project area of AFOLU projects, including appropriate information on climate, hydrology, topography, relevant historic conditions, soils, vegetation and ecosystems.

The project proponent is requested to update section 1.10 of the project description to include a more robust description of present and prior environmental conditions of the project area.

VVB Response:

The description of the present and prior environmental conditions of the project area including appropriate information on climate, hydrology, topography, relevant historic conditions, soils, vegetation and ecosystems, has been updated in the section 1.10 of the PD (version 04, date on 26/04/2018) as follows:

The project is located in cold temperate continental monsoon climate area. The annual average temperature is -4.7℃,and the extremely high temperature is 37.2℃, the extremely low temperature is -43.3 ℃. The annual average precipitation is 455.5mm, the frost-free period is about 101 days. There are three rivers running through the project area, they are Keyi River, Tuo River, Nuomin River. The project area is a medium and low mountain landscape, north and west are higher, and south and east are lower.

The soils of the project area are brown coniferous forest soil, dark brown soil, gray forest soil and chernozem, which are all mineral soils. The floristic zone of the project is the northern Mountain coniferous forest of the Great Khingan. The main vegetation types were larch, birch, aspen, oak trees, black birch, riverbank willow, various meadow and moss meadow, etc. The project area used to be covered by dense primordial forest, the quantity and species of wild animals and plants were plentiful. Prior to project implementation, the quantity and species of wild animals and plants are less and less due to years of timber harvest.

The project area is located in the main vein of the Great Khingan, which is the source of the Nen River, the transition zone of forest and agriculture area, also is China's most important gene bank of wild biology, and is the ecological safety barrier between the Northeast Plain which is the important commodity grain base of China and Hulunbuir grassland, is very important to the ecological environment of China. Within the scope of forest, it had a whole cold temperate forest ecosystem. Prior to project implementation,, the present ecosystem is emerging more and more fragile due to years of logging. The implementation of project (conversion of logged to protected forest) will increase the stability of the ecosystem, enhance biodiversity conservation by increasing forest cover and nature habitat connectivity.

Through reviewing the documents “The Plan for Forest utilization and Protection of Inner Mongolia Keyihe Forest Industry LLC.” by provided by PP, and other public available information (e.g. Keyihe

Forestry Bureau website, etc.), CEC confirmed that the description of the present and prior environmental conditions of the project area is appropriate and complete.
VCS Response: The additional information and detail added to section 1.10 of the project description is sufficient to close this finding. No further action is required in respect of this finding.

Finding 2 Section 2.1 of the project description and section 1.8 of the monitoring report include a list of seven tools and methodologies that are used in addition to the applied methodology, VM0010, "Methodology for Improved Forest Management: Conversion of Logged to Protected Forest". Note that section 2.1 of the *Project Description Template* and section 1.8 of the *Monitoring Report template* only require that the tools or methodologies applied to the project be listed, and not the "sources" included within the applied methodology. Please clarify whether each of the tools and methodologies listed in section 2.1 of the project description and section 1.8 of the monitoring report are being directly applied by the project, and remove any tools or methodologies that are not being directly applied.
VVB Response: The methodology used in the project is : VM0010 version 1.3: Methodology for Improved Forest Management: Conversion of Logged to Protected Forest The tools used in the project is as follows: • CDM Tool for Calculation of the Number of Sample Plots for Measurements within A/R CDM Project Activities • VCS tool VT0001 Tool for the Demonstration and Assessment of Additionality in VCS Agriculture, Forestry and Other Land Use (AFOLU) Project Activities • VCS tool for AFOLU Non-Permanence Risk Tool. Other tools not directly applied by the project have been deleted in Section 2.1 of the project description and section 1.8 of the monitoring report. CEC has reviewed the updated PD and MR, and confirmed that the tools applied in the project meet the requirements of the methodology VM0010 version 1.3 and VCS related standard. The methodology and tools is used appropriately and reasonable.
VCS Response: The updates made to section 2.1 of the project description and section 1.8 of the monitoring report are sufficient to close this finding. No further action is required in respect of this finding.

Finding 3

Section 3.1 of the project description and section 3.2.8 of the validation report contain some equations that are in Chinese characters.

As the operating language of the VCS Program is English, the project proponent and VVB are requested to translate these equations into western characters.

VVB Response:

These Chinese characters maybe due to errors produced by software when the report is transferred from Word to PDF. CEC checked the updated PDD (version 04, date on 26/04/2018), and confirmed that the equations in Section 3.1 of the project description have been all presented in English. The Chinese characters in section 3.2.8 of the validation report have been also corrected.

VCS Response:

The updates made in section 3.2.8 of the validation report and section 3.1 of the project description are sufficient to close this finding. No further action is required in respect of this finding.

Finding 4

Section 3.19 of the *VCS Standard* requires that project proponents produce a project description using the *VCS Project Description Template* and adhere to all instructional text within the template. Section 5.3.6 of the *VCS Standard* requires that VVBs produce a validation report using the *Validation Report Template* and adhere to all instructional text within the template.

Section 2.3 of the *Project Description Template* requires the project boundary and be defined and for GHG sources, sinks and reservoirs to be identified in the baseline and project scenarios. Additionally, section 3.2.3 of the *Validation Report Template* requires the VVB to describe the steps taken to assess that each GHG source, sink and reservoir has been selected correctly in accordance with the applied methodology.

Section 2.3 of the project description and section 3.2.3 of the validation report do not distinguish between GHG sources, sinks and reservoirs included within the baseline and project scenarios. The VVB and PP are requested to clarify which GHG sources, sinks and reservoirs are included within the project and baseline scenarios.

VVB Response:

In the updated PD, the GHG sources, sinks and reservoirs included within the baseline and project scenarios have been described separately, please refer to the section 2.3 in the PD (version 04, date on 26/04/2018).

In the updated Validation Report, CEC describe the steps taken to assess that each GHG source, sink and reservoir has been selected correctly in accordance with the applied methodology VM0010. In Step 3: Carbon pools and Step 4: Greenhouse Gases, the carbon pools and emission source are both presented in one table, which can clearly distinguish between GHG sources, sinks and

reservoirs included within the baseline and project scenarios, please refer to the section 3.2.3 in the Validation Report (version 03, date on 27/04/2018).
VCS Response: The updates made in section 2.3 of the project description and section 3.2.3 of the validation report are sufficient to close this finding. No further action is required in respect of this finding.

Finding 5 Section 3.19 of the *VCS Standard* requires that project proponents produce a project description using the *VCS Project Description Template* and adhere to all instructional text within the template. Section 2.3 of the *Project Description Template* requires AFOLU projects to include a diagram or map of the locations where various measures are taking place. The project proponent is requested to update section 2.3 of the project description to include a map with the locations where various measures are taking place.
VVB Response: PP has complemented the map with locations where the project is implemented. This map, including all the sub-compartments involved in the project, processed from Geographic Information System (hereinafter referred to as GIS). Besides, the geographical coordinates of all sub-compartments is detailed in PD Annex I. CEC checked the geographical coordinates with Forest second class investigation issued by Inner Mongolia autonomous region forestry survey and design institute, and confirmed the project location information is correct.
VCS Response: The information added to section 2.3 of the project description is sufficient to close this finding. No further action is required in respect of this finding.

Finding 7 Section 5.3.6 of the VCS Standard requires that VVBs produce a validation report and verification report using the Validation Report Template and Verification Report Template, respectively, and adhere to all instructional text within the templates. Section 2.5 of the Validation Report Template and of the Verification Report Template require the VVB to state the total number of corrective action requests, clarification requests, forward action requests and other findings raised during the validation and verification. The VVB is requested to update the validation and verification reports to include this information in section 2.5 of each report.

VVB Response:

Total number of corrective action requests, clarification requests, forward action requests and other findings raised during the validation and verification have been updated in the Section 2.5 of validation and verification reports as follows:

Validation Report:

1CAR and 5 CL have been raised during the validation, presented in Appendix A. Taking into account this output, the Project participant took corrections and revised its Project description (PD). All CARs and CLs are successfully closed.

No FAR and no other findings raised during the validation.

Verification Report:

0 CAR and 2 CL have been raised during the verification, presented in Appendix A. Taking into account this output, the Project participant took corrections and revised its Monitoring Report (VR). All CARs and CLs are successfully closed.

No FAR and no other findings raised during the validation.

VCS Response:

The updates made to section 2.5 of the validation report and section 2.5 of the verification report are sufficient to close this finding. No further action is required in respect of this finding.

Finding 8

Section 5.3.6 of the VCS Standard requires that VVBs produce a validation report using the *Validation Report Template* and adhere to all instructional text within the templates.

Section 3.2.6 of the *Validation Report Template* requires VVBs to provide an assessment of how it was determined that all data and parameter values used in the project description are considered reasonable in the context of the project.

Although section 3.2.8 of the validation report includes a description of how the VVB assessed each data and parameter monitored to be appropriate, it does not include a description of how the VVB assessed each parameter available at validation.

The VVB is requested to update the validation report to include a description of how each data and parameter available at validation was assessed to be appropriate in the context of the project.

VVB Response:

The assessment of data and parameter available at validation was updated in the Section 3.2.8 of Validation Report(Version 03, date on 27/04/2018), including the data value, data source and CEC assessment of each data and parameter available at validation. The detail is as follows:

Basic Parameter	Value	Data Unit	Data Source	CEC assessment

Total Area of Stratum	Birch	10454	ha	1.Timber harvest plan issued by Inner Mongolia Keyihe Forestry Bureau 2.calculated from Forest second class investigation issued by Inner Mongolia autonomous region forestry survey and design institute	Consistent with data source, and correct calculation. Considered to be appropriate and reasonable.
	Larch	10072	ha		
$V_{j,l,BSL}$	Birch	114.54	m^3/ha		
	Larch	118.26	m^3/ha		
$V_{EX,j,l\|BSL,y}$	Refer to ER sheet		m^3/ha		
$A_{i,p,y}$	Refer to ER sheet		ha		
D_j	Birch	0.541	t d.m. m^{-3}	"Land Use Change and Forestry GHG Inventory(2013)" of "Second National Information Notification on China Climate Change"	Consistent with the methodology
	Larch	0.490	t d.m. m^{-3}		
BEF	Birch	1.424	dimensionless		
	Larch	1.416	dimensionless		
$BCEF_R$	Birch	0.770	t d.m. m^{-3}	calculated by BEF and D	Consistent with the methodology, and correct calculation. Considered to be appropriate and reasonable.
	Larch	0.694	t d.m. m^{-3}		
CF_j	Birch/Larch	0.5	tC t d.m.$^{-1}$	VM0010 version 1.3	Consistent with the methodology. Considered to be appropriate and reasonable.
WW	Birch/Larch	24%	kg kg^{-1}		
SLF	Birch/Larch	0.12	kg kg^{-1}		
OF	Birch/Larch	0.62	kg kg^{-1}		
Regrowth rate in baseline scenario	Birch	1.56	$m^3.ha^{-1}.yr^{-1}$	The statement on the growth volume in Keyihe issued by Inner Mongolia autonomous region forestry survey and design institute	Consistent with data source. Considered to be appropriate and reasonable.
	Larch	1.83	$m^3.ha^{-1}.yr^{-1}$		
Ongoing growth rate in project scenario	Birch	2.80	$m^3.ha^{-1}.yr^{-1}$	The statement on the growth volume in Keyihe issued by Inner Mongolia autonomous region forestry survey and design institute	Consistent with data source. Considered to be appropriate and reasonable.
	Larch	2.35	$m^3.ha^{-1}.yr^{-1}$		
A_{sp}	0.04		ha	Monitoring Manual issued by the Inner Mongolia Keyihe Forest Industry LLC	Considered to be appropriate and reasonable.

Note: 1. $A_{1,i,p}$, $A_{2\text{-}10,i,p}$, $A_{11\text{-}20,i,p}$, A_t are calculated by Ai,p,y;

2. RGRi is calculated by Regrowth rate in baseline scenario, BEF and D;

3.As for the project tree species, there are no allometric equation (fj(x,y)) applied in the project area, the average annual growth is adopted for the estimated calculation of carbon stock change. Therefore, the on-going growth rate is based on the expertise issued by the statement of local forest authority, and in the monitoring report, the actual sampling data will be adopted.

VCS Response:

The updates made to section 3.2.8 of the validation report are sufficient to close this finding. No further action is required in respect of this finding.

Finding 9

Section 5.3.6 of the VCS Standard requires that VVBs produce a validation report and verification report using the *Validation Report Template* and *Verification Report Template*, respectively, and adhere to all instructional text within the templates.

Section 3.1 of the *Validation Report Template* and section 4.1 of the *Verification Report Template* require the VVB to justify conclusions on and the steps taken to assess the implementation status of sustainable development contributions.

The VVB is requested to update the validation and verification reports to describe how the sustainable development contributions included in the project description and monitoring report were assessed.

VVB Response:

The assessment of sustainable development contributions has been complemented in the validation and verification report.

Through checking the documents provided by PP (local Stakeholder's questionnaires), and on-site visit and interviewing local people, CEC confirmed that the project will promote local sustainable developments. Major contributions of the project are as follows:

- The implementation of the project will control soil and water erosion and land degradation in the project areas;
- The implementation of the project will enhance biodiversity conservation by increasing forest cover and nature habitat connectivity;
- The implementation of the project will absorb and fix carbon dioxide every year by conversion of logged to protected forest, and reduce GHG emission.
- The implementation of the project will generate income for the local farmers by regular forest management. Local people's standard of living has been developed.

VCS Response:

The updates made to section 3.1 of the validation report and section 4.1 of the verification report are sufficient to close this finding. No further action is required in respect of this finding.

Finding 10

Section 1.5 of the project description describes that commercial timber harvest is strictly forbidden in the Inner Mongolia Keyihe Forest since the project start date, 01/01/2013, per a decree issued by the project proponent, the Keyihe Forestry Bureau. Further, section 3.3.1 of the project description describes how timber harvest throughout China is strictly controlled by the national forest authority.

Given this information, the VVB is requested to describe how they assessed that the project is not mandated by any systematically enforced law, statute or other regulatory framework, per the regulatory surplus requirements under the VCS Program.
VVB Response: It is possible that language translation has caused misunderstanding. According to Forest law of the People's Republic of China[1] Article 6 and Regulations of the People's Republic of China on forestry law[2] Article 28, forest cutting management quota system is implemented in China. The central government issued the maximum timber harvest to provinces and larger state-owned forest enterprises every five years. For example, according to the 13th Five-year Forest Harvest Limit issued by State Council (Guohan [2016] No.32)[3], the maximum timber harvest volume in China during the period from 2016 to 2020 is 25,403.6*10^4 m^3 per year; the maximum timber harvest volume in Inner Mongolia Autonomous Region during the period from 2016 to 2020 is 142.1*10^4 m^3 per year. Therefore, the maximum timber harvest is strictly controlled by the national forest authority, which not means forbidding timber harvest. Therefore, the project owner has the right to decide the quantity of logging within the authorized limit. The project proponent decided that since 01/01/2013 commercial timber harvest is stopped due to forest and ecosystem protection. Therefore, the project is not mandated by any systematically enforced law, statute or other regulatory framework.
VCS Response: Based on your response, it is understood that the project area could have been harvested within the authorized limit for the Inner Mongolia Autonomous Region, but that the project owner has chosen to not harvest this area. The project proponent and VVB are further requested to clarify whether the reduction in harvesting within the project area will reduce the total harvest within the Inner Mongolia Autonomous Region below the maximum authorized amount (i.e., clarify if this will have an impact on market leakage). The project proponent and VVB are requested to update section 2.5.1 of the project description and section 3.2.5 of the validation report, respectively, to include this information about how the project's reduction in the area harvested fits in with the Forest Law of the People's Republic of China, and make a connection to any impacts that may have on leakage as discussed in section 3.3.2 of the project description and section 3.2.6.3.2 of the validation report.
VVB Response (2): The reduction in harvesting within the project area will have no impact on market leakage for the

1 http://www.law-lib.com/law/law_view.asp?id=95233

2 http://www.law-lib.com/law/law_view.asp?id=7

3 http://www.gov.cn/zhengce/content/2016-02/16/content_5041486.htm

following reasons:

(1) Firstly，according to the 13th Five-year Forest Harvest Limit issued by State Council (Guohan [2016] No.32), the maximum timber harvest volume in China from 2016 to 2020 is 25,403.6*10^4 m^3 per year, the maximum timber harvest volume in Inner Mongolia Autonomous Region during the period from 2016 to 2020 is 142.1*10^4 m^3 per year, and the planned annual average harvest volume of the project is 12.0*10^4 m^3 during the period from 2016 to 2020, accounting 0.04% of the national harvest volume, contributes only 8.44% of the Inner Mongolia Autonomous Region harvest volume. Therefore, the project timber harvest just cover very small fraction of total timber harvest in Inner Mongolia Autonomous Region, even smaller in China. The implementation of this project will not lead to changes in timber price of market. The stable timber price made that the country logging will not increase as a result of the decreased supply of the timber caused by the project.

(2) Secondly，according to Forest law of the People's Republic of China Article 26 and Regulations of the People's Republic of China on forestry law Article 30, The State draws up a unified annual timber harvest plan, which shall not exceed the approved annual quota for tree felling. Therefore, the timber harvest plan is approved by the government. The forest owner cannot increase timber harvest freely according to timber market without government approval.

(3) Thirdly, Regulations of the People's Republic of China on forestry law Article 38 and Article 39 clearly stipulates the punishment for the illegal logging. According to the volume and quantity of illegal logging, punishment includes not only 5-10 times compensation of replanting, but also 2-10 times economic penalty.

In conclusion, the reduction in harvesting within the project area will have no impact on market leakage; and the PD and VR has been updated in the section of market leakage.

Besides, Section 2.5.1 of the project description and section 3.2.4 of the validation report have supplemented the description about project reduction in the area harvested fits in with the Forest Law of the People’s Republic of China, and have updated the description according to market leakage in section 3.3.2 of the project description and section 3.2.6.3.2 of the validation report. Please refer to Section 2.5.1 of the project description and section 3.2.4 of the validation report.

VCS Response (2):

It is understood that Forest Law of the People’s Republic of China is strictly enforced, and therefore it is reasonable to assume that no unauthorized harvesting will occur outside of the project area as a result of the project activity.

Our concern is that the project does not represent an actual reduction in harvesting within the Inner Mongolia Autonomous Region, as the harvest could be shifted to another area that is authorized for harvest. The VVB is requested to clearly confirm whether the project represents a real reduction in harvesting within the geographic area.

VVB Response (3)

The reduction in harvesting within the project area cannot be shifted to another area that is authorized for harvest for the following reasons:

Firstly, forest-related laws and regulations are strictly implemented, so timber harvest above the authorized quota is absolutely not permitted. According to Forest law of the People's Republic of China[4] Article 6/26/38 and Regulations of the People's Republic of China on forestry law[5] Article 28/30/39, forest cutting management quota system has been implemented in China. The National Government issued the maximum timber harvest volume (quota) for provinces and the province government issued the quota to the projects in the geographic area. Punishment for the illegal logging is very severe. In addition, according to Implementation of Forest law of the People's Republic of China of the Inner Mongolia Autonomous Region[6] Article 36, once the quota is issued in Inner Mongolia Autonomous Region, the maximum harvest volume for provincial or the projects has been fixed and could not be changed or shifted. Therefore, the Law not only just strictly restrict in the nationwide, but also the province-wide. Besides, Inner Mongolia Autonomous Region is the ecologically fragile area in China, forest cutting management quota system and no illegal logging is strictly enforced. In conclusion, the reduction in harvesting of the project in Inner Mongolia will not cause any increase of quota for any other authorized area.

Secondly, historical data indicates that the total timber harvest in Inner Mongolia Region is decreasing steadily year by year, and there is no possibility for leakage. According to available data of China Statistical Yearbook, the annual timber production in Inner Mongolia Autonomous Region from 2011 to 2015 is 2,179,000[7] m^3, 2,088,000[8] m^3, 1,862,000[9] m^3, 1,787,000[10] m^3, and 1,426,000[11] m^3 respectively. From 2011 to 2015 the timber production decreased by 34.56% sharply, with average annual decline rate 6.91%. Obviously, Inner Mongolia Autonomous Region doesn't balance for the reduction in harvesting within the project area from other area, which also demonstrates that the project hasn't caused market leakage in Inner Mongolia.

Therefore, regarding to the section 8.3.2 "Market leakage" of methodology VM0010,there is no market leakage for the project.

4 http://www.law-lib.com/law/law_view.asp?id=95233

5 http://www.law-lib.com/law/law_view.asp?id=7

6 http://www.law-lib.com/law/law_view1.asp?id=35953

7 《China Statistical Yearbook 2012》

8 《China Statistical Yearbook 2013》

9 《China Statistical Yearbook 2014》

10 《China Statistical Yearbook 2015》

11 《China Statistical Yearbook 2016》

No.	Requirements of section 8.3.2 "Market leakage" of methodology VM0010	CEC Conclusion
1	LF_{ME}=0, if it can be demonstrated that no market-effects leakage will occur within national boundaries, that is if no new concessions are being assigned AND annual extracted volumes cannot be increased within existing national concessions AND illegal logging is absent (or de minimis) in the host country.	(1) **no new concessions are being assigned AND annual extracted volumes cannot be increased within existing national concessions:** please refer to the above two reasons in VVB Response (3). (2) **llegal logging is absent (or de minimis) in the host country:** Please refer to the third explanation of VVB Response (2). Therefore, LF_{ME}=0, according to VM0010 version 1.3 Equation (40) $GHG_{LK,LtPF,t^*} = LF_{ME} * GHG_{NET,BSL,t^*}$ there is no market leakage.

In conclusion, the harvest of the project could not be shifted to another area that is authorized for harvest. The project represents a real reduction in harvesting within the geographic area.

VCS Response:

Based on the VVB's response, and the updates made to the project description and validation report, it is understood that the project represents a real reduction in harvest in the region. Additionally, it is understood that the project is in compliance with the applied methodology and is not required to estimate market leakage, per the requirements of the methodology, since there are strictly enforced limits on the harvest in the region.

2 MINOR FINDINGS

No minor findings

3 ASSESSMENT CONCLUSION

On 04 April 2018, Verra issued the initial round of findings.

On 30 April 2018, an updated project description, validation report, and response to findings were submitted. The updates and responses to findings were sufficient to close nine of the findings.

On 07 May 2018, Verra issued a second round of findings.

On 14 May 2018, an updated project description, validation report and response to findings were submitted.

On 25 May 2018, Verra issued a third round of findings.

On 02 July 2018, an updated project description, validation report and response to findings were submitted. The updates and response to finding was sufficient to close the remaining assessment finding.