

# VERIFICATION REPORT OF INNER MONGOLIA CHAO'ER IMPROVED FOREST MANAGEMENT PROJECT



Document Prepared By China Environmental United Certification Center Co., Ltd.

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<b>Prepared By</b>	China Environmental United Certification Centre Co., Ltd.
<b>Contact</b>	Address: No.1 Yuhuanlu, Chaoyang District, Beijing, China, 100029 Tel : 86-10-84665051 E-mail : cdm@mepcec.com Website : www.mepcec.com
<b>Approved By</b>	Zhang Xiaodan
<b>Work Carried Out By</b>	CUI Xiaodong, XING Jiang

## Summary:

China Environmental United Certification Center Co., Ltd ( hereafter refers to 'CEC') has conducted the verification of Inner Mongolia Chao'er Improved Forest Management Project, owned by Chao'er Forest Bureau, which is located in south region of the Greater Khingan Mountains, Hulun Buir City, Inner Mongolia Autonomous Region, P.R.C, and applying the VCS methodology VM0010 version 1.2, on the basis of VCS Standard Version 3.5, as well as criteria given to provide for consistent project operations, monitoring and reporting.

The verification scope is defined as an independent and objective review and ex-post determination of the monitored GHG emission reductions, and consisted of the following three phases: i) desk review of the project design, the baseline and monitoring plan; ii) follow-up interviews with project stakeholders; iii) resolution of outstanding issues and the issuance of the final verification report and opinion. The overall verification, from Contract Review to Verification Report & Opinion, was conducted using CEC internal procedures.

In summary, CEC confirms that the project is implemented as planned and described in the validated VCS project description. The forestry management conversion includes 11,010 ha logged to Protected Forest (LtPF) spreading in Wuyi Forestry Centre, which are protected as non-commercial forestry. The monitoring system is in place and reduces the GHG emissions as anthropogenic GHG removals by sinks. The GHG emission removals by sinks verified totalize 380,247 tCO<sub>2</sub>e for the monitoring period.

Our opinion relates to the projects' GHG emissions and resulting GHG emission reductions reported and related to the valid project baseline, monitoring plan and its associated documents.

Our opinion relates to the projects' actual net GHG removals by sinks and resulting net anthropogenic GHG removals by sinks is reported and related to the valid and registered project baseline, monitoring plan and its associated documents.

Reporting period	01/01/2010 to 31/12/2014
Baseline net GHG removals by sinks	64,902.48 tCO <sub>2</sub> e
Actual net GHG removals by sinks	-428,928.46 tCO <sub>2</sub> e
GHG emissions due to leakage	0 tCO <sub>2</sub> e
Total number of credits withheld in VCS buffer account	113,581 tCO <sub>2</sub> e
Net anthropogenic GHG removals by sinks	380,247 tCO <sub>2</sub> e

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## 1 INTRODUCTION

### 1.1 Objective

Chao'er Forest Bureau (hereafter referred to as "the PP") has commissioned China Environmental United Certification Center Co., Ltd (CEC) to verify the emission removals of Inner Mongolia Chao'er Improved Forest Management Project (hereafter referred to as "the Project") owned by Chao'er Forest Bureau, which is located in south region of the Greater Khingan Mountains, Hulun Buir City, Inner Mongolia Autonomous Region, P.R.C for the period from 01/01/2010 to 31/12/2014.

CEC as the validation/verification body (VVB) of the Project has been accredited as a DOE by UNFCCC and also meets the competence requirements as set out in ISO 14065:2007.

The objective of verification is to verify the reported emission removals generated by the Project for the period from 01/01/2010 to 31/12/2014 and to confirm that actual monitoring systems and procedures are in compliance with that described in the monitoring plan and the additional requirements stated by the VCS Association (VCSA).

### 1.2 Scope and Criteria

The verification scope is defined as an independent and objective review of the VCS project description (VCS-PD), the project's baseline study and monitoring plan, VCS monitoring report (VCS-MR) and other relevant documents. The information in these documents is reviewed against VCS requirements, UNFCCC rules and associated interpretations.

The verification is not meant to provide any consulting towards the client. However, stated requests for clarifications and/or corrective actions may provide input for improvement of the project monitoring towards reductions in the GHG emissions.

The verification is carried out on the basis of the following requirements, applicable for this project activity:

- VCS Program Guide, version 3.5, dated 08/10/2013
- VCS Standard, version 3.5, dated 25/03/2015
- Registration & Issuance Process, version 3.6, dated 25/03/2015
- VCS Validation and Verification Manual, version 3.1, dated 08/10/2013
- Other rules and requirements

### 1.3 Level of Assurance

CEC has undertaken a reasonable assurance engagement in accordance with VCS requirements. It requires a reasonable level of assurance in verification that GHG assertions are free of material

errors, omissions and misrepresentations. The verification conclusion is based on the VCS-PD, VCS-MR, supporting evidences made available to the verifier and information collected through performing interviews and during the on-site inspection.

## 1.4 Summary Description of the Project

The Project is located in south region of the Greater Khingan Mountains, Hulun Buir City, Inner Mongolia Autonomous Region, P.R.C, with the geo-coordinate range of 120°17'52"E~121°37'50"E and 47°35'21"N~48°10'13"N. The annual estimated emission removals are 69,326 tCO<sub>2</sub>e.

The Project involves 11,010 ha logged to Protected Forest (LtPF) project which belongs to the improvement forestry management (IMF). It applies methodology VM0010 version 1.2 "Methodology for Improved Forest Management: Conversion of Logged to Protected Forest". The protected species are Birch and Pinus.

The Project Start Date is 01/01/2010, when a forest protection plan was issued by local government to cancel the commercial timber harvest.

## 2 VERIFICATION PROCESS

### 2.1 Method and Criteria

The overall verification, from Contract Review to Verification Report & Opinion, was conducted using CEC internal procedures.

CEC verified the project against the VCS requirements.

### 2.2 Document Review

The assessment of the project documentation provided by the project participant is based upon both quantitative and qualitative information on emission reductions. Quantitative information comprises the reported numbers in the VCS monitoring report (MR) version 02 dated 11/11/2015 and emission reduction calculation spreadsheet. Qualitative information comprises information on internal management controls, calculation procedures, procedures for transfer of data, frequency of emissions reports, and review and internal audit of calculations.

In addition to the monitoring documentation provided by the project proponents, the VVB reviews:

- (a) The VCS-PD and the monitoring plan;
- (b) The validation report
- (c) The applied monitoring methodology;
- (d) Other information and references relevant to the project activity's resulting emission reductions (e.g. IPCC reports, 3<sup>rd</sup> party measurement reports or national regulations).

### 2.3 Interviews

On 23/10/2014, verification team performed a site visit and interviews with project stakeholders to confirm selected information and to resolve issues identified in the document review. Representatives of Chao'er Forest Bureau and CITIC Environment Protection Co., Ltd were interviewed (see References). The main topics of the interviews are listed as below.

<b>Interview topics</b>	<b>Organization</b>	<b>Name</b>
Project background information. Project technology, operation and maintenance. Project approval and right of use Project implementation status. Project management and monitoring plan. Stakeholder consultation process	Chao'er Forest Bureau	Song Yongli Yu Shiping Zhang Wenyong Li Huanjun
Applicability of selected methodology. Baseline determination. Emission reductions calculation. Emission reduction monitoring plan.	CITIC Environment Protection Co., Ltd	Liu Tianyue

### 2.4 Site Inspections

On 23/10/2014, the validation team performed the site inspection with the project proponent of the project activity. During this site inspection interviews with the representatives of the project owner, the consultant and project stakeholders were carried out to confirm selected information and to resolve issues identified in the document review.

### 2.5 Resolution of Findings

The objective of this phase of the verification is to resolve issues related to the monitoring, implementation and operations of the registered project activity that could impair the capacity of the project activity to achieve emission removals or influence the monitoring and reporting of emission removals prior to CEC's positive conclusion on the GHG emission removals calculation.

Findings established during the verification can either be seen as a non-fulfilment of criteria ensuring the proper implementation of a project or where a risk to deliver high quality emission reductions is identified.

A Corrective Action Request (CAR) is raised, if one of the following situations occurs:

- (a) Non-compliance with the monitoring plan or methodology are found in monitoring and reporting and has not been sufficiently documented by the project participants, or if the evidence provided to prove conformity is insufficient;
- (b) Modifications to the implementation, operation and monitoring of the registered project activity has not been sufficiently documented by the project participants;

(c) Mistakes have been made in applying assumptions, data or calculations of emission reductions that will impact the quantity of emission reductions;

(d) Issues identified in a FAR during validation to be verified during verification or previous verification(s) have not been resolved by the project participants.

A Clarification Request (CL) is raised, if information is insufficient or not clear enough to determine whether the applicable VCS requirements have been met.

A Forward Action Request (FAR) is raised, for actions if the monitoring and reporting require attention and/or adjustment for the next verification period.

To guarantee the transparency of the verification process, the concerns raised are documented in more detail in Appendix A.

### **2.5.1 Forward Action Requests**

No Forward Action Request is raised during this monitoring period.

## **2.6 Eligibility for Validation Activities**

Not applicable, CEC as the validation/verification body (VVB) of the Project has been accredited as a DOE by UNFCCC and also meets the competence requirements as set out in ISO 14065:2007.

## **3 VALIDATION FINDINGS**

### **3.1 Participation under Other GHG Programs**

Not applicable, the project has not been registered, or is seeking registration under any other GHG programs.

### **3.2 Methodology Deviations**

Not applicable, no deviation from methodology.

### **3.3 Project Description Deviations**

Not applicable, no deviation from project description in the VCS PD version 01.1 dated 10/11/2014.

### **3.4 Grouped Project**

Not applicable, the project is not a grouped project.

## 4 VERIFICATION FINDINGS

### 4.1 Project Implementation Status

CEC has performed a site visit and found that the Project has been implemented since 01/01/2010, when a forest protection plan was issued by local government to cancel the commercial timber harvest. On the basis of this site visit and the reviewed project description it can be confirmed that, the improved forestry management, such as conversion of logged to protection forest (Protected species are: Slash Pine and Chinese Fir) are implemented.

The forestry management conversion includes 11,010 ha logged to Protected Forest (LtPF). The different forest types, as well as the monitoring system, metering equipment and the monitoring procedure have been implemented and managed as described in the VCS PD.

CEC has onsite checked the boundary of the Project and confirmed they are consistent with those stated in the VCS PD.

No changes to the project design have been identified during this verification. The implementation and operation of the project activity have been conducted in accordance with the description contained in the VCS PD.

### 4.2 Accuracy of GHG Emission Reduction and Removal Calculations

Monitoring has been carried out in accordance with the monitoring plan contained in the VCS PD.

The parameters required by the monitoring plan and how CEC has verified the information flow (from data generation, aggregation, to recording, calculation and reporting) and appropriateness of the applied measurement / determination method, the correctness of the values applied for emission removals calculation, the accuracy, and applied QA/QC measures for all relevant monitoring parameters including the values in the monitoring report are described below:

1) Illegal Logging PRA Results;

The value is zero since there is clear infrastructure, hiring and policies are in place to prevent illegal logging. CEC has checked the documents provided by the local Forest Public Security Bureau and confirmed there is no illegal logging happened during the period from year 2008 to year 2014. Hence, the value applied is consistent with the methodology.

2) Result of Limited Illegal Logging Survey;

The value is zero since there are clear infrastructure, hiring and policies are in place to prevent illegal logging.

3)  $A_{burn,i,t}$  Area burnt in stratum i at time t

N/A, no forest of the Project burnt during this monitoring period.

4)  $A_{\text{dist},i,t}$ , Area disturbed in stratum  $i$  at time  $t$

N/A, no forest of the Project disturbed during this monitoring period.

5)  $A_{\text{DIST\_IL},i}$ : Area potentially impacted by illegal logging in stratum  $i$

N/A, no forest of the Project will be disturbed during this monitoring period.

6)  $C_{\text{DIST\_IL},i,t|\text{PRJ}}$ : biomass carbon of trees cut and removed through illegal logging in stratum  $i$  at time  $t$

N/A, no illegal logging during this monitoring period.

7)  $A_{\text{Pi}}$ : Total area of illegal logging sample plots in stratum  $i$

N/A, no illegal logging during this monitoring period.

8)  $\text{PMP}_i$ : Merchantable biomass as a proportion of total aboveground tree biomass for stratum  $i$  within the project boundaries

N/A, no merchantable volume of timber in the forest during this monitoring period.

9)  $A_i$ : Area covered by stratum  $i$

The value is from the national second class forest investigation, which is updated every 10 years.

The data and parameters available in the validation are listed below:

1)  $V_{l,j,i,\text{sp}}$ , Merchantable volume for tree  $l$  of species  $j$  in sample plot spin stratum  $i$

2)  $\text{CF}_j$ , Carbon fraction of dry matter for species  $j$

3)  $D_j$ , Basic wood density of species  $j$  in  $\text{t d.m. m}^{-3}$

4)  $f_j(X,Y\dots)$ , Allometric equation(s) for species  $j$  linking measured tree variable(s) to aboveground biomass of living trees

5) Total area of illegal logging sample plots in stratum  $i$  ( $A_{\text{Pi}}$ )

6)  $\text{BCEF}_R$ , Biomass conversion and expansion factor applicable to wood removals in the project area

7)  $G_{gi}$ , Emission factor for stratum  $i$  for gas  $g$

8)  $\text{RGR}_i$ , Forest re-growth rate post timber harvest for stratum  $i$   $m$

9)  $V_{\text{EX},j,i|\text{BSL}}$ , Mean volume of extracted timber per unit area for species  $j$  in stratum  $i$   $l$

10)  $A_{i,p}$  , Area covered by stratum I over land parcel p

A complete set of data for the specified monitoring period is available.

The critical parameter used for the determination of the Emission Removals is the area of forest, number of plant, diameter at breast height of a tree and other parameters relate to the forest inventory. The data pertaining to the above parameters are maintained in the identified records. All the data are in compliance with that stated in the Monitoring Report version 02.

According to the methodology and the VCS PD, the net change in carbon stock from wood products and logging slash across all parcels within the first year of harvest in the baseline is calculated as:

$$\Delta C_{NET,BSL(1)} = \sum_{i=1}^M \sum_{p=1}^P A_{1,i,p} * \left( \left( \frac{\Delta C_{DIVSLASH,i,p,BSL}}{10} \right) + \Delta C_{WFP0,i,p,BSL} + (\Delta C_{WFP100,i,p,BSL}/20) \right)$$

The net change in carbon stock from wood products and logging slash across all parcels in the years 2-10 since harvest in the baseline are calculated as:

$$\Delta C_{NET,BSL(2-10)} = \sum_{i=1}^M \sum_{p=1}^P A_{2-10,i,p} * \left( \left( \frac{\Delta C_{DIVSLASH,i,p,BSL}}{10} \right) + (\Delta C_{WFP100,i,p,BSL}/20) \right)$$

The net change in carbon stock from wood products across all parcels in the years 11-20 since harvest in the baseline are calculated as:

$$\Delta C_{NET,BSL(11-20)} = \sum_{i=1}^M \sum_{p=1}^P A_{11-20,i,p} * (\Delta C_{WFP100,i,p,BSL}/20)$$

The net change (sequestration) in carbon stock due to forest regrowth across all parcels in all years since harvest in the baseline scenario are calculated as:

$$\Delta C_{NET,BSL(1+)} = \sum_{i=1}^M \sum_{p=1}^P A_{i,p,t^*} * (-\Delta C_{RG,i,p,BSL})$$

Therefore, the net change in carbon stock across all parcels harvested over each year of the project crediting period in the baseline scenario since the start of the project activity is calculated as:

$$\Delta C_{NET,BSL,t^*} = \Delta C_{NET,BSL(1)} + \Delta C_{NET,BSL(2-10)} + \Delta C_{NET,BSL(11-20)} + \Delta C_{NET,BSL(1+)}$$

The net carbon stock change in the baseline scenario must be converted to net greenhouse gas emissions and is calculated as:

$$GHG_{NET,BSL,t^*} = \Delta C_{NET,BSL,t^*} * \frac{44}{12}$$

CEC has checked the Emission Removals calculation sheet and found the calculation is correct.

According to the methodology and the VCS PD, net greenhouse gas emissions in the project scenario in year t, equal to emissions resulting from forest disturbance (both illegal logging and natural disturbances) minus carbon sequestration through ongoing forest growth.

$$\Delta C_{AB,t,PRJ} = \left( \sum_{i=1}^M \left( A_i * \frac{C_{AB,i,t,PRJ} - C_{AB,i,t1,PRJ}}{T} \right) \right) * \frac{44}{12} \quad (9)$$

For the calculation result of annual carbon stock change in aboveground biomass of trees, since the total carbon stock change is calculated based on the monitoring data of five years (2010-2014), and the annual carbon stock change cannot be separately monitored, the average growth method is adapted to calculate the annual carbon stock change. The validation team checked the "forest resource operation and management" published by Chinese Forest Press in 2001, and confirmed that the average growth method is acceptable and reasonable based on the expertise and experience.

Based on the IPCC 2006 Inventory Guidelines, estimation of greenhouse gas emissions from biomass burning must be calculated as:

$$\Delta C_{DIST-FR,t,PRJ} = \sum_{i=1}^M A_{burn,i,t} * B_{i,t,PRJ} * COMF_i * G_{g,i} * 10^{-3} * GWP_{CH4} \quad (10)$$

As there is no fire occurred during the monitoring period,  $\Delta C_{DIST-FR,t,PRJ}$  is equal to 0.

It is conservatively assumed that the natural disturbance is a stand-replacing disturbance, and that the biomass change as a result of the natural disturbance ( $\Delta C_{DIST,t,PRJ}$ ) is emitted in the year of disturbance.

$$\Delta C_{DIST,t,PRJ} = \sum_{i=1}^M (A_{dist,i,t} * \sum_{j=1}^J \{C_{AB,j,i,BSL}\}) * \frac{44}{12} \quad (11)$$

As indicates by the relevant statement issued by the local authority, no natural disasters occurred during the monitoring period,  $\Delta C_{DIST,t,PRJ}$  is equal to zero.

CEC has checked the Emission Removals calculation sheet and found the calculation is correct.

### Activity shifting leakage

According to VM0010 version 1.2, there may be no leakage due to activity shifting. This was demonstrated through:

The verification team reviewed the historical timber production completion records from 2008 to 2014, confirmed that the total extracted volume of Chao'er Forestry Bureau is decreasing compared with the plan from the with-project time period. In 2008, 2010 and 2014 the total timber production of Chao'er Forestry Industry Co., Ltd is 275,600 m<sup>3</sup>, 225,500m<sup>3</sup>, and 143,900m<sup>3</sup> respectively, with the drop rate of 44.42%. Hence, it is confirmed that there is no deviation from historical trends.

The verification team reviewed the timber production plan issued by Chao'er Forestry Bureau every year based on the overall national five-year-plan, the total timber production plan is decreasing. Take the plan of 2001, 2008 2010, 2014 for example, the figure dropped from 299,700, 275,600, 225,500 to 143,900, with the drop rate of 47.79%. Conclusion can be made that the total timber production plan is decreasing instead of increasing, not affected by the reducing of the project activity.

Therefore, the activity shifting leakage is zero.

**Market leakage**

According to the Validation Report version 01.0 (/6/), the leakage factor for market-effects calculations ( $LF_{ME}$ ) is 0.

CEC has verified the following documents:

- According to the National Forestry Law of P.R. China, the forest concessions must be strictly implemented;
- According to the Forestry Law of P.R. China, Illegal logging in China will be faced punished by replanting, penalty, or criminal responsibilities.
- In recent years, the illegal logging is absent in China.
- According to the 11<sup>th</sup> Five-year plan issued by State Forest Bureau (Guofa[2005]No.41), the annual extracted volume from 2006 to 2009 is  $24,815.5 \times 10^4 \text{ m}^3$ , and the extracted volume of the project is  $30.05 \times 10^4 \text{ m}^3$ , which is 0.12% of the national extracted volume, which will not result in the significant national concession and illegal logging. (/19/)

CEC can confirm that the logging is impossible increased as a result of the decreased supply of the timber caused by the project in this monitoring period.

Therefore,  $LF_{ME} = 0$ .

According to VM0010 version 1.2, the Net Project Greenhouse Gas Emission removals in the monitoring crediting period are calculated as:

$$GHG_{CREDITS,LT,PF,t^*} = GHG_{NET,BSL,t^*} - GHG_{NET,PRJ,t^*} - GHG_{LK,LT,PF,t^*}$$

Where:

$GHG_{CREDITS,LT,PF}$  project greenhouse gas credits associated with the implementation of improved forest management (IFM) activities in the project scenario,  $tCO_2e$

$GHG_{NET,BSL}$  net greenhouse gas emissions in the baseline scenario in the year  $t^*$  since the start of the project activity,  $tCO_2e$

$GHG_{NET|PRJ}$  net greenhouse gas emissions in the project scenario in the year  $t^*$  since the start of the project activity,  $tCO_2e$

$GHG_{LK|LtPF}$  total greenhouse gas emissions due to leakage arising outside the project boundary as a result of the implementation of improved forest management (IFM) activities in the year  $t^*$  since the start of the project activity, in the project scenario,  $tCO_2e$

According to the VCS PD, if the uncertainty propagation  $U_{total|LtPF} \leq 0.15$  then no deduction will result for uncertainty; If  $U_{total|LtPF} > 0.15$  then the amount of greenhouse gas emission credits associated with IFM activities will be deducted as follows:

$$Credits_{total|LtPF} = GHG_{credits|LtPF} * (1 - U_{total|LtPF})$$

The uncertainty propagation  $U_{total|LtPF} = 7.053\% \leq 0.15$  in this monitoring period; therefore,

$$Credits_{total|LtPF} = GHG_{credits|LtPF}$$

As per the methodology VM0010 version 1.2 and the VCS PD, the amount of VCU's that can be issued at time  $t=t_2$  (the date of verification) for monitoring period  $T=t_2-t_1$ , is calculated as:

$$VCU_{net|LtPF} = (Credits_{total,t_2|LtPF} - Credits_{total,t_1|LtPF}) - Bu_{|IFM-VCS}$$

Where:

$VCU_{net|LtPF}$  number of verified carbon units; dimensionless;

$Credits_{total,t_1|LtPF}$  net anthropogenic greenhouse gas removals by sinks, as estimated for  $t^*=t_1$  in  $tCO_2e$ ;

$Credits_{total,t_2|LtPF}$  net anthropogenic greenhouse gas removals by sinks, as estimated for  $t^*=t_2$  in  $tCO_2e$ ; and

$Bu_{|IFM-VCS}$  total number of credits withheld in VCS buffer account.

According to the VCS MR, the overall risk rating in this monitoring period is 13, hence 13% of the total emission reductions was deducted.

### 4.3 Quality of Evidence to Determine GHG Emission Reductions and Removals

All necessary documentation is collected, referenced and is easily accessible in hard-copy or electronic format. The data pertaining to the monitored parameters are maintained in the identified internal records and consistent with the values stated in the Monitoring Report version 02. Key data have been cross-checked via external sources, such as records of Filed measurement of Forest management inventory.

#### 4.4 Non-Permanence Risk Analysis

CEC has reviewed the Non-Permanence Risk Report (/20/) and the related evidences, include the Timber Management Plan (/14/), and interviewed with stakeholders, CEC has evaluated the risk assessment undertaken by the project proponent and assess all data, rationales, assumptions, justifications and documentation provided by the project proponent to support the non-permanence risk rating, then CEC confirms that the evidences are substantial, and the overall risk rating is 23% based on the provided evidences, AFOLU Non-Permanence Risk Tool and VCS Standard.

**CL#1** was raised requesting the PP to recalculate the emission reductions with consideration of the corrected uncertainty calculation. In the revised MR (version 02 dated 11/11/2015), the PP corrected the uncertainty analysis calculation and the emission reductions. Through checking the calculation of uncertainty analysis and emission reductions, the verification team can confirm that the result has been correctly calculated. Hence, **CL#1** was closed.

### 5 VERIFICATION CONCLUSION

China Environmental United Certification Center Co., Ltd has conducted the verification of Inner Mongolia Chao'er Improved Forest Management Project, owned by Chao'er Forest Bureau, which is located in south region of the Greater Khingan Mountains, Hulun Buir City, Inner Mongolia Autonomous Region, P.R.C, and applying the VCS methodology VM0010 version 1.2, on the basis of VCS Standard Version 3.5, as well as criteria given to provide for consistent project operations, monitoring and reporting.

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In summary, CEC confirms that the project is implemented as planned and described in the validated VCS project description. The forestry management conversion includes 11,010 ha logged to Protected Forest (LTPF) spreading in Wuyi Forestry Centre, which are protected as non-commercial forestry. The monitoring system is in place and reduces the GHG emissions as anthropogenic GHG removals by sinks. The GHG emission removals by sinks verified totalize 380,247 tCO<sub>2</sub>e for the monitoring period.

Our opinion relates to the projects' actual net GHG removals by sinks and resulting net anthropogenic GHG removals by sinks is reported and related to the valid and registered project baseline, monitoring plan and its associated documents.

Verification period: From 01/01/2010 to 31/12/2014

Verified GHG emission reductions and removals in the above verification period:

Year	Baseline emissions or removals (tCO <sub>2</sub> e)	Project emissions or removals (tCO <sub>2</sub> e)	Leakage emissions (tCO <sub>2</sub> e)	Total number of credits withheld in VCS buffer account (tCO <sub>2</sub> e)	Net GHG emission reductions or removals (tCO <sub>2</sub> e)
01/01/2010 to 31/12/2010	15,045.26	-85,785.69	0	23,191	77,639.00
01/01/2011 to 31/12/2011	14,012.88	-85,785.69	0	22,954	76,844.00
01/01/2012 to 31/12/2012	12,980.50	-85,785.69	0	22,716	76,049.00
01/01/2013 to 31/12/2013	11,948.11	-85,785.69	0	22,479	75,255.00
01/01/2014 to 31/12/2014	10,915.73	-85,785.69	0	22,241	74,460.00
<b>Total</b>	<b>64,902.48</b>	<b>-428,928.46</b>	<b>0</b>	<b>113,581</b>	<b>380,247</b>

## 6 REFERENCE

- /1/ VCS-PD version 01.1 dated 10/11/2014
- /2/ VCS-MR version 01 dated 31/05/2015
- /3/ VCS-MR version 02 dated 11/10/2015
- /4/ ER calculation spreadsheet
- /5/ Uncertainty Analysis spreadsheet
- /6/ Validation Report version 1.0 dated 12/13/2014
- /7/ VM0010 version 1.2 dated 27/03/2013
- /8/ VCS Standard version 3.5 dated 25/03/2015
- /9/ Agriculture, Forestry and Other Land Use (AFOLU) Requirements Version 3.4
- /10/ Tool for the Demonstration and Assessment of Additionality in VCS Agriculture, Forestry and Other Land Use (AFOLU) Project Activities” (VT0001 VCS AFOLU Additionality Tool v3.0) dated 01/02/2012
- /11/ AFOLU Non-Permanence Risk Tool, VCS version 3
- /12/ Tool for the “Calculation of the number of sample plots for measurements within A/R CDM project activities” (version 02.1.0) approved by the CDM Executive Board.
- /13/ VCS Validation and Verification Manual, version 3.1, dated 08/10/2013
- /14/ Timber Management Plan
- /15/ Business license of the project proponent
- /16/ Historical management records
- /17/ Forestry Right Certificates of the Project
- /18/ Maps of the Project
- /19/ Certification issued by local Forest Public Security Bureau on illegal logging
- /20/ Non-Permanence Risk Report
- /21/ <http://v-c-s.org>
- /22/ The national forestry inventory (II) in 2005

- /23/ National Forestry Law of China
- /24/ Notice of the review opinion approved by the State Council which about the year's forest harvest limit in the 11th Five-year in all regions reported by State Forest Bureau (Guofa[2005]No.41)
- /25/ Tool for calculation of the number of sample plots for measurements within A/R CDM project activity
- /26/ Technical guidelines for national forest inventory. SFA 2004 No.25
- /27/ IPCC Guidelines for National Greenhouse Gas Inventories (2006), Table 4.9.
- /28/ "Economic Evaluation Method and Parameters for Project Construction" (version 3)

APPENDIX A: RESOLUTION OF CORRECTIVE ACTION /CLARIFICATION / FORWARD ACTION REQUESTS

Draft report clarifications and corrective action requests by validation team	Summary of project participant response	Verification team conclusion
<p><b>CL#1</b> was raised requesting the PP to recalculate the emission reductions with consideration of the corrected uncertainty calculation.</p>	<p>The uncertainty analysis calculation spreadsheet has been corrected and provided to DOE and the emission reduction has been recalculated.</p>	<p>In the revised MR (version 02 dated 11/11/2015), the PP corrected the uncertainty analysis calculation and the emission reductions. Through checking the calculation of uncertainty analysis and emission reductions, the verification team can confirm that the result has been correctly calculated. Hence, <b>CL#1</b> was closed.</p>