Verification and certification report form for CDM programme of activities

(version 02.0)

Complete this form in accordance with the instructions attached at the end of this form.

BASIC INFORMATION	
Title and UNFCCC/GS reference number of the programme of activities (PoA)	Title: Sichuan Rural Poor-Household Biogas Development Programme GS Registration Reference Number：PoA GS1239 UNFCCC reference number: 2898
Gold Standard project id of the VPA / GS CPA	GS1288: 2898-0001 GS1693: 2898-0002 GS1694: 2898-0003 GS1695: 2898-0004 GS1696: 2898-0005 GS1697: 2898-0006 GS1698: 2898-0007 GS1699: 2898-0008 GS1700: 2898-0009 GS1701: 2898-0010 GS1702: 2898-0011 GS1703: 2898-0012 GS1704: 2898-0013 GS1705: 2898-0014 GS1706: 2898-0015 GS1707: 2898-0016 GS1708: 2898-0017 GS1709: 2898-0018 GS1710: 2898-0019 GS1711: 2898-0020 GS1712: 2898-0021 GS1713: 2898-0022 GS1714: 2898-0023 GS1715: 2898-0024 GS1716: 2898-0025 GS1717: 2898-0026 GS1718: 2898-0027 GS1719: 2898-0028 GS1720: 2898-0029 GS1721: 2898-0030 GS1722: 2898-0031 GS1723: 2898-0032 GS1724: 2898-0033 GS1725: 2898-0034 GS1726: 2898-0035 GS1727: 2898-0036 GS1728: 2898-0037 GS1730: 2898-0038 GS1731: 2898-0039 GS1732: 2898-0040 GS1733: 2898-0041 GS1734: 2898-0042 GS1735: 2898-0043 GS1736: 2898-0044

	GS1737: 2898-0045 GS1738: 2898-0046 GS1739: 2898-0047 GS1740: 2898-0048 GS1741: 2898-0049 GS1742: 2898-0050 GS1743: 2898-0051 GS1744: 2898-0052 GS1745: 2898-0053 GS2566: 2898-0054 GS2567: 2898-0055 GS2568: 2898-0056 GS2569: 2898-0057 GS2570: 2898-0058 GS2571: 2898-0059 GS2572: 2898-0060 GS2573: 2898-0061 GS2574: 2898-0062 GS2575: 2898-0063 GS2576: 2898-0064 GS2577: 2898-0065 GS2578: 2898-0066 GS2579: 2898-0067 GS2580: 2898-0068 GS2581: 2898-0069 GS2582: 2898-0070 GS2583: 2898-0071 GS2584: 2898-0072 GS2585: 2898-0073 GS3588: 2898-0074 GS3589: 2898-0075 GS3590: 2898-0076 GS3591: 2898-0077 GS3592: 2898-0078 GS3593: 2898-0079 GS3594: 2898-0080 GS3595: 2898-0081 GS3596: 2898-0082 GS3597: 2898-0083 GS3598: 2898-0084 GS3599: 2898-0085 GS3600: 2898-0086 GS3601: 2898-0087
Version number(s) of the PoA-DD(s) to which this report applies	2
Version number of the verification and certification report	01
Completion date of the verification and certification report	05/09/2019
Date of project design certification	22/04/2012
Start date of crediting period	11/04/2012
Monitoring period number and duration	Monitoring period number: 7th

of this morning period	Duration of this morning period: 01/01/2018 – 31/12/2018 (both days are included)	
Version number of the monitoring report to which this report applies	2	
Coordinating/managing entity (CME)	Chengdu Oasis Science & Technology Co., Ltd.	
Host Parties	Host Parties of the PoA	Is this a host Party to a CPA covered in this report? (yes/no)
	People's Republic of China	Yes
Applied methodologies and standardized baselines	Methodologies: AMS-I.I.– *Biogas/biomass thermal applications for households/small users* (version 04) (EB68, Annex 25); AMS-III.R.– *Methane recovery in agricultural activities at household/small farm level* (version 02) (EB59, Annex 4) Standardized baselines: N/A	
Mandatory sectoral scopes linked to the applied methodologies	Scope 1: Energy industries (renewable - / non-renewable sources) Scope 13: Waste handling and disposal	
Gold Standard statement/product certification sought (GSVER/ADALYs/RECs etc.)	GS CER	
Estimated amount of GHG emission reductions or GHG removals for this monitoring period in the included CPAs covered in this report	876,123 tCO_2e	
Certified amount of GHG emission reductions or GHG removals for this monitoring period for the included CPAs covered in this report	822,520 tCO_2e	
SDG Contributions targeted (as per approved PDD)	Goal 3: Good Health and Well-Being Goal 6: Clean Water and Sanitation Goal 7: Affordable and Clean Energy Goal 8: Decent work and economic growth Goal 13: Climate Action	
Name and UNFCCC reference number of the VVB	VVB Name: Shenzhen CTI International Certification Co., Ltd (CTI)	
Name, position and signature of the approver of the verification and certification report	Zhou Lu General Manager	

SECTION A. Executive summary

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UPM Umwelt-Projekt-Management GmbH has commissioned the VVB Shenzhen CTI International Certification Co., Ltd (CTI) to perform the 7th periodic verification of the GS Programme of Activities "Sichuan Rural Poor-Household Biogas Development Programme" in Sichuan Province, P. R. China (hereafter "PoA"). GS Registration Reference Number GS1239. This report summarizes the findings of the verification of the Project, performed on the basis of Gold Standard for the Global Goals Principles and Requirements, UNFCCC criteria, as well as criteria given to provide for consistent project operations, monitoring and reporting. Verification is required for all registered GS project activities as well as programme of activities intending to confirm their achieved emission reductions and proceed with request for issuance of GS CERs. This report contains the findings from the verification and a certification statement for the certified emission reductions.

Verification is the periodic independent review and *ex post* determination of both quantitative and qualitative information by a Validation and Verification Body (VVB) of the monitored reductions in GHG emissions that have occurred as a result of the registered CDM programme of activities during a defined monitoring period.

Certification is the written assurance by a VVB that, during a specific period in time, a project activity achieved the emission reductions as verified.

The objective of this verification is to verify and certify emission reductions reported for the "Sichuan Rural Poor-Household Biogas Development Programme" for the period 01/01/2018-31/12/2018.

The purpose of verification is to review the monitoring results and verify that monitoring methodology was implemented according to monitoring plan and monitoring data, used to confirm the reductions in anthropogenic emissions by sources is sufficient, definitive and presented in a concise and transparent manner.

In particular, monitoring plan, monitoring report and the PoA's compliance with relevant UNFCCC and host Party criteria are verified in order to confirm that the PoA has been implemented in accordance with previously registered design and conservative assumptions, as documented and also if the monitoring plan is in compliance with the approved monitoring methodology.

The scope of the verification is:

- To verify that actual monitoring systems and procedures are in compliance with the monitoring systems and procedures described in the monitoring plan.
- To evaluate the GHG emission reduction data and express a conclusion with a reasonable level of assurance about whether the reported GHG emission reduction data is free from material misstatement.
- To verify that reported GHG emission data is sufficiently supported by evidence.
- To verify that the project contributes to sustainability development continuously.
- Where sampling is involved, sampling guidelines are applied to ensure the adequate sampling and survey method is followed in reaching professional judgements.

The verification shall ensure that reported emission reductions are complete and accurate in order to be certified. The verification comprises a review of the monitoring report over the monitoring period 01/01/2018-31/12/2018 based on the registered PoA-DD in part of the monitoring parameters and monitoring plan, emission reduction calculation spreadsheet, monitoring methodology and all related evidence provided by project participants. On-site visit and stakeholders' interviews are also performed as part of the verification process.

The verification has been performed as described in the Gold Standard for the Global Goals Principles and Requirements/66/, CDM validation and verification standard for programme of activities (version 02.0)/34/ and constitutes the following steps:

- Desk review of the MR (version 1 dated 27/05/2019)/1/ and the relevant documents
- On-site assessment (22/07/2019 to 31/07/2019)
- Issuance of draft verification report & verification protocol
- Desk review of the revised MR and related documents
- Resolution of the raised CAR
- Issuance of the final verification report

The PoA aims to reduce a large amount of greenhouse gases (GHG) by facilitating the installation of a large number of household biogas digesters. To achieve this target, the PoA generates additional incentives to install digesters to households that are supported by existing subsidy schemes. Target group of the PoA are low-income households located in Sichuan Province, China. The primarily targeted areas are thirteen cities (however, the PoA shall not be limited to these thirteen cities exclusively): Yibin, Neijiang, Suining, Ziyang, Zigong, Luzhou, Leshan, Meishan, Mianyang, Guang'An, Ganzi, Aba and Dazhou, all of which are located in Sichuan.

The 7th monitoring period of this PoA consists of the verification of the 87 CPAs, Sichuan Rural Poor-Household Biogas Development Programme, CPA Nb. SCHHBG-2010-001 to CPA Nb. SCHHBG-2014-087. The verifiers have reviewed the implementation of the monitoring plan (MP) as described in the approved revised PoA-DD/4/ and CPA-DDs/10,11,12,13/. The total number of the households for the 87 CPAs during this monitoring period is 395,435/4/,/10,11,12,13/.

The detailed geographic coordinates of the 87 CPAs included in this monitoring period is listed as below:

CPA reference number	GS reference number	City(ies)	Longitude	Latitude
2898-0001	GS1288	Yibin	103° 36' - 105° 20' E	27° 50' - 29° 16' N
2898-0002	GS1693	Yibin	103° 36' - 105° 20' E	27° 50' - 29° 16' N
2898-0003	GS1694	Yibin	103° 36' - 105° 20' E	27° 50' - 29° 16' N
2898-0004	GS1695	Yibin	103° 36' - 105° 20' E	27° 50' - 29° 16' N
2898-0005	GS1696	Yibin	103° 36' - 105° 20' E	27° 50' - 29° 16' N
2898-0006	GS1697	Yibin	103° 36' - 105° 20' E	27° 50' - 29° 16' N
2898-0007	GS1698	Yibin	103° 36' - 105° 20' E	27° 50' - 29° 16' N
2898-0008	GS1699	Yibin	103° 36' - 105° 20' E	27° 50' - 29° 16' N
2898-0009	GS1700	Yibin	103° 36' - 105° 20' E	27° 50' - 29° 16' N
2898-0010	GS1701	Yibin	103° 36' - 105° 20' E	27° 50' - 29° 16' N

2898-0011	GS1702	Mianyang	103° 45' - 105° 43' E	30° 42' - 33° 03' N
2898-0012	GS1703	Mianyang	103° 45' - 105° 43' E	30° 42' - 33° 03' N
2898-0013	GS1704	Mianyang	103° 45' - 105° 43' E	30° 42' - 33° 03' N
2898-0014	GS1705	Mianyang	103° 45' - 105° 43' E	30° 42' - 33° 03' N
2898-0015	GS1706	Mianyang	103° 45' - 105° 43' E	30° 42' - 33° 03' N
2898-0016	GS1707	Mianyang	103° 45' - 105° 43' E	30° 42' - 33° 03' N
2898-0017	GS1708	Mianyang	103° 45' - 105° 43' E	30° 42' - 33° 03' N
2898-0018	GS1709	Mianyang	103° 45' - 105° 43' E	30° 42' - 33° 03' N
2898-0019	GS1710	Mianyang	103° 45' - 105° 43' E	30° 42' - 33° 03' N
2898-0020	GS1711	Mianyang	103° 45' - 105° 43' E	30° 42' - 33° 03' N
2898-0021	GS1712	Mianyang	103° 45' - 105° 43' E	30° 42' - 33° 03' N
2898-0022	GS1713	Mianyang	103° 45' - 105° 43' E	30° 42' - 33° 03' N
2898-0023	GS1714	Mianyang	103° 45' - 105° 43' E	30° 42' - 33° 03' N
2898-0024	GS1715	Mianyang	103° 45' - 105° 43' E	30° 42' - 33° 03' N
2898-0025	GS1716	Mianyang	103° 45' - 105° 43' E	30° 42' - 33° 03' N
2898-0026	GS1717	Mianyang	103° 45' - 105° 43' E	30° 42' - 33° 03' N
2898-0027	GS1718	Mianyang	103° 45' - 105° 43' E	30° 42' - 33° 03' N
2898-0028	GS1719	Guang'an	105° 57' - 107° 18' E	30° 01' - 30° 51' N
2898-0029	GS1720	Guang'an	105° 57' - 107° 18' E	30° 01' - 30° 51' N
2898-0030	GS1721	Guang'an	105° 57' - 107° 18' E	30° 01' - 30° 51' N
2898-0031	GS1722	Guang'an	105° 57' - 107° 18' E	30° 01' - 30° 51' N
2898-0032	GS1723	Suining	105° 03' - 106° 59' E	30° 10' - 31° 10' N
2898-0033	GS1724	Suining	105° 03' - 106° 59' E	30° 10' - 31° 10' N
2898-0034	GS1725	Suining	105° 03' - 106° 59' E	30° 10' - 31° 10' N
2898-0035	GS1726	Dazhou	106° 40' - 108° 33' E	30° 19' - 32° 20' N
2898-0036	GS1727	Ziyang	104° 11' - 105° 45' E	29° 41' - 30° 39' N
2898-0037	GS1728	Ziyang	104° 11' - 105° 45' E	29° 41' - 30° 39' N
2898-0038	GS1730	Ziyang	104° 11' - 105° 45' E	29° 41' - 30° 39' N
2898-0039	GS1731	Ziyang	104° 11' - 105° 45' E	29° 41' - 30° 39' N
2898-0040	GS1732	Ziyang	104° 11' - 105° 45' E	29° 41' - 30° 39' N
2898-0041	GS1733	Ziyang	104° 11' - 105° 45' E	29° 41' - 30° 39' N
2898-0042	GS1734	Meishan	102° 51' - 104° 30' E	29° 24' - 30° 22' N
2898-0043	GS1735	Meishan	102° 51' - 104° 30' E	29° 24' - 30° 22' N
2898-0044	GS1736	Meishan	102° 51' - 104° 30' E	29° 24' - 30° 22' N
2898-0045	GS1737	Meishan	102° 51' - 104° 30' E	29° 24' - 30° 22' N
2898-0046	GS1738	Neijiang	104° 16' - 105° 26' E	29° 11' - 30° 02' N
2898-0047	GS1739	Leshan	102° 54' - 104° 15' E	28° 25' - 29° 56' N
2898-0048	GS1740	Leshan	102° 54' - 104° 15' E	28° 25' - 29° 56' N
2898-0049	GS1741	Zigong	104° 02' - 105° 16' E	28° 55' - 29° 38' N
2898-0050	GS1742	Luzhou	105° 08' - 106° 28' E	27° 39' - 29° 20' N
2898-0051	GS1743	Luzhou	105° 08' - 106° 28' E	27° 39' - 29° 20' N
2898-0052	GS1744	Dazhou, Aba	100° 30' - 108° 33' E	30° 19' - 34° 19' N
2898-0053	GS1745	Guang'an, Dazhou, Leshan	102° 54' - 108° 33' E	28° 25' - 32° 20' N
2898-0054	GS2566	Luzhou	105° 08' - 106° 28' E	27° 39' - 29° 20' N

2898-0055	GS2567	Mianyang	103° 45' - 105° 43' E	30° 42' - 33° 03' N
2898-0056	GS2568	Mianyang	103° 45' - 105° 43' E	30° 42' - 33° 03' N
2898-0057	GS2569	Mianyang	103° 45' - 105° 43' E	30° 42' - 33° 03' N
2898-0058	GS2570	Mianyang	103° 45' - 105° 43' E	30° 42' - 33° 03' N
2898-0059	GS2571	Mianyang	103° 45' - 105° 43' E	30° 42' - 33° 03' N
2898-0060	GS2572	Mianyang	103° 45' - 105° 43' E	30° 42' - 33° 03' N
2898-0061	GS2573	Mianyang	103° 45' - 105° 43' E	30° 42' - 33° 03' N
2898-0062	GS2574	Mianyang	103° 45' - 105° 43' E	30° 42' - 33° 03' N
2898-0063	GS2575	Suining	105° 03' - 106° 59' E	30° 10' - 31° 10' N
2898-0064	GS2576	Neijiang	104° 16' - 105° 26' E	29° 11' - 30° 02' N
2898-0065	GS2577	Leshan	102° 54' - 104° 15' E	28° 25' - 29° 56' N
2898-0066	GS2578	Yibin	103° 36' - 105° 20' E	27° 50' - 29° 16' N
2898-0067	GS2579	Guang'an	105° 57' - 107° 18' E	30° 01' - 30° 51' N
2898-0068	GS2580	Guangan, Dazhou, Meishan, Leshan, Luzhou, Aba and Ganzi	97° 22' - 108° 33' E	27° 39' - 34° 20' N
2898-0069	GS2581	Mianyang and Meishan	102° 51' - 105° 43' E	29° 24' - 33° 03' N
2898-0070	GS2582	Mianyang and Neijiang	103° 45' - 105° 43' E	29° 11' - 33° 03' N
2898-0071	GS2583	Yibin, Suining and Neijiang	103° 36' - 106° 59' E	27° 50' - 31° 10' N
2898-0072	GS2584	Yibin and Ziyang	103° 36' - 105° 45' E	27° 50' - 30° 39' N
2898-0073	GS2585	Ziyang and Zigong	104° 11' - 105° 16' E	29° 41' - 29° 38' N
2898-0074	GS3588	Yibin	103° 36' - 105° 20' E	27° 50' - 29° 16' N
2898-0075	GS3589	Mianyang	103° 45' - 105° 43' E	30° 42' - 33° 03' N
2898-0076	GS3590	Dazhou	106° 40' - 108° 33' E	30° 19' - 32° 20' N
2898-0077	GS3591	Ziyang	104° 11' - 105° 45' E	29° 41' - 30° 39' N
2898-0078	GS3592	Ziyang	104° 11' - 105° 45' E	29° 41' - 30° 39' N
2898-0079	GS3593	Meishan	102° 51' - 104° 30' E	29° 24' - 30° 22' N
2898-0080	GS3594	Neijiang	104° 16' - 105° 26' E	29° 11' - 30° 02' N
2898-0081	GS3595	Luzhou	105° 08' - 106° 28' E	27° 39' - 29° 20' N
2898-0082	GS3596	Guang'an, Dazhou, Aba	100° 30' - 108° 33' E	30° 01' - 34° 19' N
2898-0083	GS3597	Guang'an, Leshan	102° 54' - 107° 18' E	28° 25' - 30° 51' N
2898-0084	GS3598	Leshan, Luzhou	102° 54' - 106° 28' E	27° 39' - 29° 56' N
2898-0085	GS3599	Mianyang, Meishan, Luzhou	102° 51' - 106° 28' E	27° 39' - 33° 03' N
2898-0086	GS3600	Yibin, Mianyang, Suining, Neijiang	103° 36' - 106° 59' E	27° 50' - 33° 03' N
2898-0087	GS3601	Yibin, Ziyang, Zigong	103° 36' - 105° 45' E	27° 50' - 30° 39' N

In CTI's opinion, the GHG emission reductions reported for the PoA in the monitoring report are fairly stated. It is confirmed that the GHG emission reductions were calculated correctly on the basis of the approved monitoring methodologies AMS-I.I. (Version 04)[/32/], AMS-III.R. (Version 02)[/33/] and the monitoring plan contained in the PoA-DD (Version 2 dated 30/10/2017)[/4/].

CTI confirms that the GHG emission reductions are calculated without material misstatements. Based on the evidence and information that are considered necessary to guarantee that GHG emission reductions are appropriately calculated, CTI is able to certify that emission reductions from the PoA "Sichuan Rural Poor-Household Biogas Development Programme" during the indicated monitoring period.

SECTION B. Verification team, technical reviewer and approver

B.1. Verification team members

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of VVB or outsourced entity)	Involvement in			
						Desk/document review	On-site inspection	Interview(s)	Verification findings
1.	Team Leader	IR	Li	Ziqi	CTI	√	√	√	√
2.	Team Member	IR	Dai	Qinghua	CTI	√	√	√	√

B.2. Technical reviewer and approver of the verification and certification report

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of VVB or outsourced entity)
1.	Technical reviewer	IR	Lin	Shunrong	CTI
2.	Approver	IR	Zhou	Lu	CTI

SECTION C. Application of materiality in conducting the verification

C.1. Consideration of materiality in planning the verification

No.	Risk that could lead to material errors, omissions or misstatements	Assessment of the risk		Response to the risk in the verification plan and/or sampling plan
		Risk level	Justification	
1.	*Sample*	*Medium*	*Sample size is not suitable; or the surveyed households in the PoA level are not random*	1. *Cross-check the procedure to identify the sample size against the sample guideline[40] and standard[41], and confirm the sample size is calculated correctly, and chose 200 in a conservation approach, compared 139 (calculated result of sample size). Furthermore, the relative error of the 200 sample results is lower and the statistical quality is sufficient.* 2. *Using a central online platform, the CME determined the households to be included in the sampling using a simple random approach and submits the household references to the local data collectors.* 3. *CTI conducted a random sample following the sample standard during site-visit period, visited 85 households who are partial sourced from the sample conducted by CME and the others are beyond 200 households survey. Based on the result of acceptance sampling, the monitoring records are deemed acceptable.*
2	*Data management and Human errors*	*Low*	*Typographic errors in the spreadsheets and Human error is likely to occur if the monitoring personnel are not trained well or inexperienced in data recording procedures while recording.*	4. *Require the CME to assess all the data again and confirm that no further errors are made.* 5. *All the monitoring personnel are well trained and required to complete the simulated test and ensure each trainee are qualified to undertaken household survey* 6. *The hand-written survey records are checked and the data are randomly compared with data in database for the consistency.* 7. *Data quality controlled by CME, there are four steps to ensure the data quality and consistency.*

C.2. Consideration of materiality in conducting the verification

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The errors identified in the PoA are below the threshold limit of materiality and hence not material. The GHG emission reductions are calculated without material misstatements.

SECTION D. Means of verification

D.1. Desk/document review

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Desk review of all documents provided by the client and CME and publicly available documents relevant for the verification including monitoring plan, monitoring report, monitoring methodology, project design document, approved post registration change reports, applicable tools in particular attention to the frequency of measurements, QA/QC procedures and other relevant documents was conducted by CTI.

In addition to the monitoring documentation provided by the project participants, CTI also reviewed:

(i) The registered PoA-DD and the corresponding validation report/3,47/;

(ii) The registered or included CPA-DDs, including the monitoring plan /5-9/;

(iii) The latest approved PoA-DD and latest approved CPA-DD specific (CPA Nb. SCHHBG-2010-001 to CPA Nb. SCHHBG-2014-087) /4,10-13/;

(iv) Validation Reports for CPA inclusion Sichuan Rural Poor-Household Biogas Development Programme, CPA Nb. SCHHBG-2010-001 to CPA Nb. SCHHBG-2014-087 /48-51/;

(v) GS Passport for PoA and CPAs/65/;

(vi) Validation reports of GS4GG transition Annex/69/;

(vii) Gold Standard for the Global Goals Transition Annex approved by GS on 31/01/2018/77/;

(viii) The post-registration changes validation assessment opinion/56,57/;

(ix) The applied monitoring methodologies/32,33/;

(x) Previous monitoring reports and verification reports for CDM/52-55/;

(xi) Previous monitoring reports and verification reports for GS/69/;

(xii) Relevant decisions, clarifications and guidance from the CMP and the CDM Executive Board/39-41/;

(xiii) Any other information and references relevant to the project activity's resulting emission reductions (e.g., IPCC reports etc)/42-46/.

D.2. On-site inspection

Duration of on-site inspection: 22/07/2019 to 31/07/2019				
No.	**Activity performed on-site**	**Site location**	**Date**	**Team member**
1.	**Opening Meeting** ➢ Round of introduction ➢ Scope of Audit ➢ Introduction of Verification Process ➢ confirming focus area for the audit ➢ Final confirmation of audit plan ➢ Attendance Register	Sichuan Rural Energy Office in Chengdu City, Sichuan Province, China	22/07/2019	Li Ziqi, Dai Qinghua
2.	**Interview with PP and CME representative (information included but not limited)** ➢ Information of PoA and included CPAs implementation ➢ The local development of this industry and relevant policy ➢ Technology utilized, Technical equipment and operation ➢ Starting date of PoA and included CPAs and crediting period ➢ Management Procedure and Method taken by CME ➢ Involved personnel and responsibilities ➢ Emission reduction Monitoring Plan and implementation of included CPAs taken by CME for this monitoring period ➢ Sampling Plan and implementation of included CPAs taken by CME for this monitoring period ➢ Training and detailed procedures ➢ Monitoring Data collection and archive procedure and method ➢ Environmental aspects	Sichuan Rural Energy Office in Chengdu City, Sichuan Province, China	22/07/2019	Li Ziqi, Dai Qinghua
3.	**Sites Visit** ➢ Visit randomly selected Households (HHs) to conduct physical inspection to the household digesters in order to verify the monitoring information presented in the monitoring report ➢ Verify whether the PoA implementation is in line with the description in the registered PoA-DD ➢ Verifying whether all the included CPAs were operated as described in the registered PoA-DD and the CPA-DDs ➢ Interview with City and County Level Rural Energy Office representative to verify how they manage the HHs in each CPA and how to collect the monitoring data by sampling method ➢ Interview with HHs, getting relevant information by filling questionnaires to compare with the monitoring data in monitoring report	Randomly selected HHs in Sichuan Province, China	22/07/2019 ~31/07/2019	Li Ziqi, Dai Qinghua
4.	**Documents and Data check (Including**	Sichuan Rural	31/07/2019	Li Ziqi, Dai Qinghua

	but not limited) ➢ Emission Calculation sheets ➢ Organization Chart of CME and CPA implementer ➢ Monitoring Manual ➢ Operation manual of data management system of the PoA ➢ Sample size calculation spreadsheet ➢ Commission record ➢ Statement on the number of household equipped with biogas digester in this PoA (included CPAs) ➢ Statement on the existing number of household equipped with biogas digester and the number of household included in each CPA ➢ Table of checked and accepted documents for all constructed biogas digesters ➢ Household list that included in each CPA ➢ Sample of manual check and acceptance records of the included CPAs. ➢ Training material copy and training records of the survey staff of this PoA ➢ Comprehensive baseline survey records ➢ Survey list of the 200 samples ➢ Questionnaire paper that filled by the investigated households ➢ The IT system to collect and analyze the monitoring survey data ➢ Sichuan Statistical Yearbook of 2018 ➢ Biogas stove test report	Energy Office in Chengdu City, Sichuan Province, China		
5.	**Preparation of Findings** ➢ Internal Discussion of verification team	Sichuan Rural Energy Office in Chengdu City, Sichuan Province, China	31/07/2019	Li Ziqi, Dai Qinghua
6.	**Closing Meeting** ➢ Presenting audit findings ➢ Introduce following procedures after site visit	Sichuan Rural Energy Office in Chengdu City, Sichuan Province, China	31/07/2019	Li Ziqi, Dai Qinghua

D.3. Interviews

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	FU	Yinyin	Chengdu Oasis Science & Technology Co., Ltd(CME)/ Project Manager	22/07/2019 ~31/07/2019	• General aspects of the PoA and the CPA • Changes since validation • Monitoring data management; • Quality management system	Li Ziqi, Dai Qinghua

					• Sampling method • Data uncertainty and residual risks; • GHG calculation • Procedural aspects of the verification; • SDG targets and achievements	
2.	He	Wanning	Sichuan Rural Energy Office/ Researcher	22/07/2019 ~31/07/2019	• Project design and implementation • Project related legal issues • Equipment installation and starting of operation • Monitoring plan and Procedures • QA and QC • Training history and records • Data collection and record keeping • Operation and maintenance records • Management system • SDG targets and achievements	Li Ziqi, Dai Qinghua
3.	Xiong	Lei	Sichuan Rural Energy Office/Section Chief	22/07/2019 ~31/07/2019		
4.	Song	Yumin	Sichuan Rural Energy Office/Staff	22/07/2019 ~31/07/2019		
5.	Xu	Dongqing	Dachuan District Rural Energy Office/Director	22/07/2019	• How to manage the included households • How to monitor the CPA and collect the data from sampling • Training	Li Ziqi, Dai Qinghua
6.	Tang	Xiaohua	Dachuan District Rural Energy Office/Staff (sampling survey staff)	22/07/2019		
7.	Niu	Keyin	Youshan Village, Dachuan District, Dazhou City/Household	22/07/2019	• digester Implementation • live stock type and No. • which enter in digester • days of digester use • sludge utilization way • fuel type and consumption quantity in baseline and project scenario • Health and well-being • Sanitation condition • Clean Energy • Economic growth • Air condition	Li Ziqi, Dai Qinghua
8.	Wang	Renyou	Youshan Village, Dachuan District, Dazhou City/Household	22/07/2019		
9.	Wei	Xiaoping	Shengxue Village, Dachuan District, Dazhou City/Household	22/07/2019		
10.	Zhang	Lin	Shengxue Village, Dachuan District, Dazhou City/Household	22/07/2019		

11.	Tang	Chaohua	Liushuiwan Village, Dachuan District, Dazhou City/Household	22/07/2019		
12.	Hu	Changyong	Jianniujiao Village, Dachuan District, Dazhou City/Household	22/07/2019		
13.	Cai	Hecheng	Dazhu County Rural Energy Office/ Staff	23/07/2019	• How to manage the included households • How to monitor the CPA and collect the data from sampling • Training	Li Ziqi, Dai Qinghua
14	Chen	Zhongbiao	Dazhu County Rural Energy Office/ Technician (sampling survey staff)	23/07/2019		
15	Jiang	Wende	Tongjia Village, Dazhu County, Dazhou City/Household	23/07/2019	• digester Implementation • live stock type and No. • which enter in digester • days of digester use • sludge utilization way • fuel type and consumption quantity in baseline and project scenario • Health and well-being • Sanitation condition • Clean Energy • Economic growth • Air condition	Li Ziqi, Dai Qinghua
16	Ou	Xiangming	Tongjia Village, Dazhu County, Dazhou City/Household	23/07/2019		
17	Yang	Tongchuan	Qingtan Village, Dazhu County, Dazhou City /Household	23/07/2019		
18	Yin	Guixiang	Qingtan Village, Dazhu County, Dazhou City /Household	23/07/2019		
19	Zhou	Zongwei	Xuanhan County Rural Energy Office/ Director	23/07/2019	• How to manage the included households • How to monitor the CPA and collect the data from sampling • Training	
20	Liao	Yuexia	Xuanhan County Rural Energy Office/ Technician (sampling survey staff)	23/07/2019		
21	Li	Qingcheng	Xuanhan County Rural Energy Office/ Station Chief (sampling survey staff)	23/07/2019		
22	Chen	Wuzhong	Youshi Village,	23/07/2019	• digester Implementation	

			Xuanhan County, Dazhou City /Household		• live stock type and No. • which enter in digester • days of digester use • sludge utilization way • fuel type and consumption quantity in baseline and project scenario • Health and well-being • Sanitation condition • Clean Energy • Economic growth • Air condition	
23	Zhu	Hui	JInbao Village, Xuanhan County, Dazhou City /Household	23/07/2019		
24	Wang	Peng	Mingyue Village, Xuanhan County, Dazhou City /Household	23/07/2019		
25	Li	Zhenglin	Guang'an County Rural Energy Office/ Director	24/07/2019	• How to manage the included households • How to monitor the CPA and collect the data from sampling • Training	Li Ziqi, Dai Qinghua
26	Zhu	Longguang	Guang'an County Rural Energy Office/ Staff (sampling survey staff)	24/07/2019		
27	Jiang	Yunguang	Guang'an County Rural Energy Office/ Staff (sampling survey staff)	24/07/2019		
28	Liu	Guoqiang	Gaoshi Village, Guang'an County, Guang'an City/Household	24/07/2019	• digester Implementation • live stock type and No. • which enter in digester • days of digester use • sludge utilization way • fuel type and consumption quantity in baseline and project scenario • Health and well-being • Sanitation condition • Clean Energy • Economic growth • Air condition	Li Ziqi, Dai Qinghua
29	Zhu	Tianjin	Gaoshi Village, Guang'an County, Guang'an City/Household	24/07/2019		
30	Zhou	Jianbin	Shigu Village, Guang'an County, Guang'an City/Household	24/07/2019		
31	Chen	Shiquan	Gaonian Village, Guang'an County, Guang'an City/Household	24/07/2019		
32	Zhu	Derong	Baocheng Village, Guang'an County, Guang'an City/Household	24/07/2019		
33	Yang	Shunhua	Dagou Village, Guang'an	24/07/2019		

			County, Guang'an City/Household			
34	Kou	Yuancheng	Linshui County Rural Energy Office/ Director	24/07/2019	• How to manage the included households • How to monitor the CPA and collect the data from sampling • Training	Li Ziqi, Dai Qinghua
35	Yue	Guangpu	Linshui County Rural Energy Office/ Staff (sampling survey staff)	24/07/2019		
36	Wang	Huating	Renmin Village, Linshui County, Guang'an City/Household	24/07/2019	• digester Implementation • live stock type and No. • which enter in digester • days of digester use • sludge utilization way • fuel type and consumption quantity in baseline and project scenario • Health and well-being • Sanitation condition • Clean Energy • Economic growth • Air condition	Li Ziqi, Dai Qinghua
37	Zhang	Jun	Ganjiaqiao Village, Linshui County, Guang'an City/Household	24/07/2019		
38	Yao	Jiangang	Dengjiapo Village, Linshui County, Guangan City/Household	24/07/2019		
39	Yuan	Simimg	Dengjiapo Village, Linshui County, Guangan City/Household	24/07/2019		
40	Cao	Liang	Bajiao Village, Linshui County, Guangan City/Household	24/07/2019		
41	Sheng	Jinhua	Mianyang City Rural Energy / Vice Director	25/07/2019~ 26/07/2019	• How to manage the included households • How to monitor the CPA and collect the data from sampling • Training	Li Ziqi, Dai Qinghua
42	Liu	Xiao	Mianyang City Rural Energy / Sector Chief	25/07/2019~ 26/07/2019		
43	Xie	Zhiwei	Santai County Rural Energy / Staff (sampling survey staff)	25/07/2019		
44	Deng	Yujun	Santai County Rural Energy / Methane controller (sampling survey staff)	25/07/2019		
45	Jiang	Wancheng	Bamiaozi Village, Santai County, Mianyang City/Household	25/07/2019	• digester Implementation • live stock type and No. • which enter in digester • days of digester use • sludge utilization way	Li Ziqi, Dai Qinghua

46	Wei	Dekun	Tongmawan Village, Santai County, Mianyang City/Household	25/07/2019	• fuel type and consumption quantity in baseline and project scenario • Health and well-being • Sanitation condition • Clean Energy • Economic growth • Air condition	
47	Zhou	Rongguo	Ganbazi Village, Santai County, Mianyang City/Household	25/07/2019		
48	Zhou	Rongquan	Ganbazi Village, Santai County, Mianyang City/Household	25/07/2019		
49	Zhang	Yusheng	Ganbazi Village, Santai County, Mianyang City/Household	25/07/2019		
50	Chen	Jianyun	Shizhuang Village, Santai County, Mianyang City/Household	25/07/2019		
51	Lin	Xugui	Lige Village, Santai County, Mianyang City/Household	25/07/2019		
52	He	Minghai	Zhima Village, Santai County, Mianyang City/Household	25/07/2019		
53	Luo	Chengyang	Jilezhai Village, Youxian District Mianyang City/Household	25/07/2019		
54	Wu	Lifu	Yanjiaqiao Village, Youxian District Mianyang City/Household	25/07/2019		
55	Wei	Qinghua	Yanjiaqiao Village, Youxian District Mianyang City/Household	25/07/2019		
56	Pan	Hongyan	Zitong County Habitat Environment Management Center/ Technician (sampling	26/07/2019	• How to manage the included households • How to monitor the CPA and collect the data from sampling • Training	Li Ziqi, Dai Qinghua

			survey staff)			
57	Tang	Wen	Zitong County Habitat Environment Management Center/ Technician (sampling survey staff)	26/07/2019		
58	Tang	Huaicheng	Haitang Village, Zitong County, Mianyang City /Household	26/07/2019	• digester Implementation • live stock type and No. • which enter in digester • days of digester use • sludge utilization way • fuel type and consumption quantity in baseline and project scenario • Health and well-being • Sanitation condition • Clean Energy • Economic growth • Air condition	Li Ziqi, Dai Qinghua
59	Luo	Guoyong	Haitang Village, Zitong County, Mianyang City /Household	26/07/2019		
60	Liang	Yihuan	Bayi Village, Zitong County, Mianyang City /Household	26/07/2019		
61	Liang	Yidong	Bayi Village, Zitong County, Mianyang City /Household	26/07/2019		
62	Pu	Zongde	Bayi Village, Zitong County, Mianyang City /Household	26/07/2019		
63	He	Xiuhua	Ziyan Village, Zitong County, Mianyang City /Household	26/07/2019		
64	Lei	Yuqi	Huanghua Village, Zitong County, Mianyang City /Household	26/07/2019		
65	Zhao	Hong	Tuya Village, Zitong County, Mianyang City/Household	26/07/2019		
66	Wen	Xiaohua	Shehong County Rural Energy / Vice Director	26/07/2019	• How to manage the included households • How to monitor the CPA and collect the data from sampling • Training	Li Ziqi, Dai Qinghua
67	Luo	Yongming	Shehong County Rural Energy / Vice Director	26/07/2019		
68	Ren	Xiuzhen	Jingjiang Village, Shehong County, Suining City/Household	26/07/2019	• digester Implementation • live stock type and No. • which enter in digester • days of digester use • sludge utilization way • fuel type and	Li Ziqi, Dai Qinghua

70	Ren	Duopin	Jingjiang Village, Shehong County, Suining City/Household	26/07/2019	consumption quantity in baseline and project scenario • Health and well-being • Sanitation condition • Clean Energy • Economic growth • Air condition	
71	Liu	Chengyan	Tianshan Village, Shehong County, Suining City/Household	26/07/2019		
72	Cui	Dejin	Zhongjiadian Village, Shehong County, Suining City/Household	26/07/2019		
73	Huang	Lu	Zizhong County Rural Energy Office/ Staff (sampling survey staff)	27/07/2019	• How to manage the included households • How to monitor the CPA and collect the data from sampling • Training	Li Ziqi, Dai Qinghua
74	Chen	Jiaxing	Ganpo Village, Zizhong County, Neijiang City/Household	27/07/2019	• digester Implementation • live stock type and No. • which enter in digester • days of digester use • sludge utilization way • fuel type and consumption quantity in baseline and project scenario • Health and well-being • Sanitation condition • Clean Energy • Economic growth • Air condition	Li Ziqi, Dai Qinghua
75	Chen	Yi	Ganpo Village, Zizhong County, Neijiang City/Household	27/07/2019		
76	Tian	Yong	Gongping Village, Zizhong County, Neijiang City/Household	27/07/2019		
77	Jiang	Pan	Danling County Rural Energy Office / Staff (sampling survey staff)	27/07/2019	• How to manage the included households • How to monitor the CPA and collect the data from sampling • Training	Li Ziqi, Dai Qinghua
78	Chen	Youchao	Fenghuang Village, Danling County, Meishan City/Household	27/07/2019	• digester Implementation • live stock type and No. • which enter in digester • days of digester use • sludge utilization way • fuel type and consumption quantity in baseline and project scenario • Health and well-being • Sanitation condition • Clean Energy • Economic growth • Air condition	Li Ziqi, Dai Qinghua
79	Chen	Junzhong	Fenghuang Village, Danling County, Meishan City/Household	27/07/2019		
80	Gu	Xianmin	Zhugou Village,	27/07/2019		

			Danling County, Meishan City/Household			
81	Zhang	Liming	Qinglong Village, Danling County, Meishan City/Household	27/07/2019		
82	Li	Jianying	Renshou County Rural Energy Office/ Staff (sampling survey staff)	27/07/2019	• How to manage the included households • How to monitor the CPA and collect the data from sampling • Training	Li Ziqi, Dai Qinghua
83	Zhou	Yulong	Renshou County Rural Energy Office/ Staff (sampling survey staff)	27/07/2019		
84	Hu	Chunyan	Renshou County Rural Energy Office/ Staff (sampling survey staff)	27/07/2019		
85	Xiong	Shuwen	Yanxiao Village, Renshou County, Meishan City/Household	27/07/2019	• digester Implementation • live stock type and No. • which enter in digester • days of digester use • sludge utilization way • fuel type and consumption quantity in baseline and project scenario • Health and well-being • Sanitation condition • Clean Energy • Economic growth • Air condition	Li Ziqi, Dai Qinghua
86	Luo	Yunhua	Yanxiao Village, Renshou County, Meishan City/Household	27/07/2019		
87	Zhou	Tinghua	Fanfeng Village, Renshou County, Meishan City/Household	27/07/2019		
88	Xiao	Kaiyan	Fanfeng Village, Renshou County, Meishan City/Household	27/07/2019		
89	Long	Mingguo	Bailong Village, Renshou County, Meishan City/Household	27/07/2019		
90	Long	Bojun	Bailong Village, Renshou	27/07/2019		

			County, Meishan City/Household			
91	Zeng	Libo	Dongpo District Rural Energy Office/ Vice Director	28/07/2019	• How to manage the included households • How to monitor the CPA and collect the data from sampling • Training	Li Ziqi, Dai Qinghua
92	Ding	Furong	Dongpo District Rural Energy Office/ Staff (sampling survey staff)	28/07/2019		
93	Li	Ji	Dongpo District Rural Energy Office/ Staff (sampling survey staff)	28/07/2019		
94	Wang	Yiquan	Sansu Village, Dongpo District, Meishan City/Household	28/07/2019	• digester Implementation • live stock type and No. • which enter in digester • days of digester use • sludge utilization way • fuel type and consumption quantity in baseline and project scenario • Health and well-being • Sanitation condition • Clean Energy • Economic growth • Air condition	Li Ziqi, Dai Qinghua
95	Huang	Chunhua	Sansu Village, Dongpo District, Meishan City/Household	28/07/2019		
96	Wang	Zeming	Sansu Village, Dongpo District, Meishan City/Household	28/07/2019		
97	Ma	Tingwen	Xinxi Village, Dongpo District, Meishan City/Household	28/07/2019		
98	Huang	Juying	Xinxi Village, Dongpo District, Meishan City/Household	28/07/2019		
99	Liang	Yongchuan	Xinxi Village, Dongpo District, Meishan City/Household	28/07/2019		
100	Han	Yongping	Gulin County Rural Energy Office/ Staff (sampling survey staff)	28/07/2019	• How to manage the included households • How to monitor the CPA and collect the data from sampling • Training	Li Ziqi, Dai Qinghua
101	He	Fei	Guanghui Village, Gulin County, Luzhou City/Household	28/07/2019	• digester Implementation • live stock type and No. • which enter in digester • days of digester use • sludge utilization way • fuel type and consumption quantity in	Li Ziqi, Dai Qinghua
102	He	Kehong	Guanghui	28/07/2019		

			Village, Gulin County, Luzhou City/Household		baseline and project scenario • Health and well-being • Sanitation condition • Clean Energy • Economic growth • Air condition	
103	Wang	Chunli	Lu County Rural Energy Office/ Staff (sampling survey staff)	28/07/2019	• How to manage the included households • How to monitor the CPA and collect the data from sampling • Training	Li Ziqi, Dai Qinghua
104	Wang	Yong	Lu County Rural Energy Office/ Staff (sampling survey staff)	28/07/2019		
105	Cao	Bin	Banli Village, Lu County, Luzhou City/Household	28/07/2019	• digester Implementation • live stock type and No. • which enter in digester • days of digester use • sludge utilization way • fuel type and consumption quantity in baseline and project scenario • Health and well-being • Sanitation condition • Clean Energy • Economic growth • Air condition	Li Ziqi, Dai Qinghua
106	Zhang	Jincheng	Banli Village, Lu County, Luzhou City/Household	28/07/2019		
107	Lei	Sijiu	Zhicheng Village, Lu County, Luzhou City/Household	28/07/2019		
108	Yan	Qiang	Mabian County Rural Energy Office/ Staff (sampling survey staff)	29/07/2019	• How to manage the included households • How to monitor the CPA and collect the data from sampling • Training	Li Ziqi, Dai Qinghua
109	Kuang	Ziqiang	Mabian County Rural Energy Office/ Staff (sampling survey staff)	29/07/2019		
110	Long	Shijun	Hongqi Village, Mabian County, Leshan City/Household	29/07/2019	• digester Implementation • live stock type and No. • which enter in digester • days of digester use • sludge utilization way • fuel type and consumption quantity in baseline and project scenario • Health and well-being • Sanitation condition • Clean Energy • Economic growth • Air condition	Li Ziqi, Dai Qinghua
111	Li	Longquan	Tianxing Village, Mabian County, Leshan City/Household	29/07/2019		
112	Gong	Jinsong	Xingwen County Rural Energy Office/ Director	30/07/2019	• How to manage the included households • How to monitor the CPA and collect the data from sampling • Training	Li Ziqi, Dai Qinghua
113	Luo	Daneng	Haina Village,	30/07/2019	• digester Implementation	Li Ziqi, Dai

			Xingwen County, Yibin City/Household		• live stock type and No. • which enter in digester • days of digester use • sludge utilization way • fuel type and consumption quantity in baseline and project scenario • Health and well-being • Sanitation condition • Clean Energy • Economic growth • Air condition	Qinghua
114	Shu	Guowen	Haina Village, Xingwen County, Yibin City/Household	30/07/2019		
115	Zheng	Lingui	Deying Village, Xingwen County, Yibin City/Household	30/07/2019		
116	Liang	Junming	Sanhe Village, Xingwen County, Yibin City/Household	30/07/2019		
117	Luo	Anqin	Sanhe Village, Xingwen County, Yibin City/Household	30/07/2019		
118	Zhao	Ruwen	Yibin County Rural Energy Office/ Staff (sampling survey staff)	31/07/2019	• How to manage the included households • How to monitor the CPA and collect the data from sampling • Training	Li Ziqi, Dai Qinghua
119	Xie	Gang	Yibin County Rural Energy Office/ Staff (sampling survey staff)	31/07/2019		
120	Zheng	Xiangqiang	Minzu Village, Yibin County, Yibin City/Household	31/07/2019	• digester Implementation • live stock type and No. • which enter in digester • days of digester use • sludge utilization way • fuel type and consumption quantity in baseline and project scenario • Health and well-being • Sanitation condition • Clean Energy • Economic growth • Air condition	Li Ziqi, Dai Qinghua
121	Wang	Yongxin	Minzu Village, Yibin County, Yibin City/Household	31/07/2019		
122	Zheng	Anquan	Minzu Village, Yibin County, Yibin City/Household	31/07/2019		
123	Chen	Qijin	Puxuan Village, Yibin County, Yibin City/Household	31/07/2019		
124	Deng	Xingkang	Puxuan Village, Yibin County, Yibin City/Household	31/07/2019		
125	Guo	Yutian	Liyuan Village, Yibin County, Yibin City/Household	31/07/2019		
126	Guo	Gaiai	UPM Umwelt-Projekt-Management GmbH/Vice General	22/07/2019 ~31/07/2019	• General aspects of the PoA and the CPA • Changes since validation • Monitoring data management;	Li Ziqi, Dai Qinghua

			Manager		• Quality management system • Sampling method • Data uncertainty and residual risks; • GHG calculation • Procedural aspects of the verification; • SDG targets and achievements	

D.4. Sampling approach

>>

In this monitoring period (01/01/2018-31/12/2018), there are 87 CPAs including 395,435 households in this PoA via checking the MR against the latest approved CPA DDs[/10-13/]. All the households are located in Sichuan province, which is a limited area. Simple random sampling approach was selected for this PoA due to relatively homogenous population being studied, given the similar average ambient temperature and similar living habit of residents in Sichuan. Therefore, simple random sampling (SRS) approach was followed by the PP to determine the sample size, and it is able to confirm the selection of sampling approach is appropriate as per verification team's local knowledge. Target population is defined as all the households included in the PoA, i.e. 395,435 households in all included CPAs.

As per the applied methodologies and latest approved PoA-DD and CPA-DDs, a single sample was drawn by the PP from the monitoring database in line with the Guidelines for Sampling and Surveys for CDM Project Activities and Programme of Activities (hereafter can be referred to as the 'sampling guideline'). According to the applied methodologies, confidence/precision of 90/10 is acceptable for sampling. According to the Standard for Sampling and Surveys for CDM Project Activities and Programme of Activities, confidence/precision of 95/10 should be applied when the sampling plan covered a group of CPAs. For this PoA, confidence/precision is determined as 95/10. Therefore, it is able to confirm that the selection of confidence/precision is appropriate by verification team.

According to the methodologies applied and latest approved PoA-DD and CPA-DDs, sampling approach is applied for the monitoring parameters:

- $FC_{m,j}$ - Annual consumption of fossil fuel type *j* coal (physical units, mass/volume) by application *m*;
- $n_{k,y}$ - Proportion of $N_{k,0}$ that remain operating at year *y* (fraction);
- $N_{m,y}$ - Number of thermal application *m* remaining in use in year *y*;
- *t* - Mean annual operation hours of the digesters;
- $N_{LT,y}$ - Annual average number of animals of type *LT* in year *y* (numbers);
- $MS\%_{i,y}$ - Fraction of manure handled in project animal manure management system *i* (i.e. digestion in the newly installed biogas digester);
- Proper sludge application ratio - Land application of digestate from biogas digesters to avoid anaerobic digestion;

The sample size of the PoA considering the parameters is calculated in a conservative way, and the least number of the sample size is 139 for two different methodology combinations. The CME chose 200 for conservation as the same. Details for identify the sample size can be referred below.

Sampling Method

The unbiased estimation of total value and mean value are:

$$\bar{y} = \frac{1}{n}\sum_{i=1}^{n} y_i \qquad (E\text{-}1)$$

$$p = \frac{a}{nm} \qquad (E\text{-}2)$$

The unbiased variation estimators of $V(\bar{y})$ and $V(p)$ with a sufficiently small *f* are:

$$v(\bar{y}) = \frac{1-f}{n}s^2 = \frac{1-f}{n(n-1)}\sum_{i=1}^{n}(y_i - \bar{y})^2 \approx \frac{1}{n(n-1)}\sum_{i=1}^{n}(y_i - \bar{y})^2 \qquad (E\text{-}3)$$

$$v(p) = \frac{1-f}{n-1}p(1-q) \approx \frac{1}{n-1}p(1-q) \qquad (E\text{-}4)$$

Relative error of the sample is to be calculated by formula:

$$r = t_{0.05}\frac{\sqrt{v(\bar{\bar{y}})}}{\bar{\bar{y}}} \qquad (E\text{-}5)$$

Where:

n	*Sample size*
f	*Sampling fraction*
N	*Total size of population*
s	*Standard error*
v	*Variation of Sample*
y_i	*Observation of a sample household*
$\bar{y}$	*Mean value of sample*
p	*Proportion of the sample*
q	*Equals to 1-p*
r	*Relative error. Default is 10%.*
$t_{0.05}$	*1.96*

Sampling Size Calculation

Sample size calculation is based on the formulas below as defined in Guidelines for Sampling and Surveys for CDM Project Activities and Programme of Activities for the simple random sampling approach adopted.

Step 1*: Confidence/precision*

The proposed PoA adopts the methodologies AMS-I.I. and AMS-III.R. It is defined in *Standard For Sampling And Surveys For CDM Project Activities And Programme Of Activities, version 4* that a confidence/precision of 95/10 should be used if one survey covers several CPAs. Since this is the highest confidence/precision mentioned in the applied methodologies and standards, these values shall be used for the sample size calculation.

***Step 2**: Initial Sample size*

(i) For mean value, the following formula is to calculate the initial sample size n_0:

$$n_0 = \frac{t^2 S^2}{r^2 \bar{Y}^2} \quad \textit{(E-6)}$$

To determine population parameter S^2 and $\bar{Y}^2$, the following options can be taken: (a) taking a small scale SRS pre-survey, or (b) reference of similar survey, or (c) double sampling scheme.

Where,

S	*Standard error of sample*
$\bar{Y}$	*Mean value of sample*
r	*Relative error. Default is 10%.*
$t_{0.05}$	*1.96*

(ii) For proportion, initial sample size n_0 can be calculated by formula:

$$n_0 = \frac{t^2 Q}{r^2 P} \quad \textit{(E-7)}$$

Where,

P	*Proportion of sample*
Q	*Q=1-P*
r	*Relative error. Default is 10%.*
$t_{0.05}$	*1.96*

***Step 4**: Other considerations of sample size*

Sample size should be corrected according to the size of target population N by formula:

$$n_1 = \frac{n_0}{1 + \frac{n_0}{N}} \quad \textit{(E-8)}$$

Then, be corrected Respond Rate r_R (initially 90%) by formula:

$$n_2 = \frac{n_1}{r_R} \quad \textit{(E-9)}$$

In case, the survey covers more than one expected parameters, conservatively, sample size n should not be less than the maximum calculated sample size of those indicators.

$$n \geq max(n_2^1, n_2^2, \ldots, n_2^n) \quad \textit{(E-10)}$$

For mean value parameters,

To determine population parameter S^2 and $\bar{Y}^2$, a small scale SRS pre-survey for this PoA was conducted in Apr 2011 by Sichuan Rural Energy Office and had statistical analysis by C/ME. Via checking the survey record[/62/], it is confirmed that a small group of 30 households with installed

biogas digesters are randomly selected to investigate the annual operation hours of biogas system, annual average pig numbers, sludge application rate and rate of digesters still in operation. Through visiting each sampled household/62/, it is concluded that the following parameters are estimated (for the application of equation E-6) for sampling the parameter of Annual average number of pigs in year y and the Mean annual operation hours of the digesters:

Annual average number of pigs in year y ($N_{LT,y}$): Mean: $\bar{Y}$ =5 pigs; Standard Deviation: S=3 pigs

Mean annual operation hours of the digesters (t): Mean $\bar{Y}$ =8,400 h; Standard Deviation: S=1,200 h

Using these values and equation E-6 the sampling sizes for these two parameters are calculated as:

Annual average number of pigs in year y ($N_{LT,y}$) : $$n \geq \frac{t^2 SD^2}{0.1^2 mean^2} = \frac{1.96^2 \times 3^2}{0.1^2 \times 5^2} = 138.3$$

Mean annual operation hours of the digesters (t): $$n \geq \frac{t^2 SD^2}{0.1^2 mean^2} = \frac{1.96^2 \times 1200^2}{0.1^2 \times 8400^2} = 7.84$$

Therefore, sample size for the mean annual operation hours of the digesters (t) should be 8, while the same for the Annual average number of pigs in year y ($N_{LT,y}$) should be 139.

For proportional parameters,

Via checking the small scale SRS pre-survey record/62/, it is confirmed that 24 households have aerobic sludge application and in operation, the proportional parameters (sludge application rate and rate of digesters still in operation) have P=0.8 (24/30), thus Q=1-P=0.2.
Hence, for sampling of Fraction of manure handled in project animal manure management system i, Proportion of $N_{k,0}$ that remain operating at year y and Proper sludge application ratio - Land application of digestate from biogas digesters to avoid anaerobic digestion, the following parameters are estimated (for the application of equation E-7):

Proper sludge application ratio: $$n \geq \frac{t^2(1-p)}{0.1^2 P} = \frac{1.96^2 \times (1-0.8)}{0.1^2 \times 0.8} = 96.04$$

Fraction of manure handled in project animal manure management system i: $$n \geq \frac{t^2(1-p)}{0.1^2 P} = \frac{1.96^2 \times (1-0.8)}{0.1^2 \times 0.8} = 96.04$$

Proportion of $N_{k,0}$ that remain operating at year y $$n \geq \frac{t^2(1-p)}{0.1^2 P} = \frac{1.96^2 \times (1-0.8)}{0.1^2 \times 0.8} = 96.04$$

Therefore, sample size for the 3 parameters should be greater than 97.

Via checking the Sample size calculation spreadsheet/16/, it is confirmed that the sample size for both mean value parameters and proportional parameters are calculated as per the Guidelines for Sampling and Surveys for CDM Project Activities and Programme of Activities and the result was recalculated by the verification team to be confirmed as correct.

As a conservative approach, a sample size of 200 was chosen by the CME, which is bigger than all calculated minimum sampling sizes, i.e 139 and 97. A Monitoring Survey list of the 200 samples/17/ was supplied by the CME, which was compiled base on the Table of checked and accepted

documents/19/ done by the survey staff. In the Survey list, name of household, digester ID, location, operation status of each biogas digester, operation days and stop days of each biogas digester, sludge utilization, monthly and annual average pig numbers, coal and other fossil fuel consumption etc. were monitored and recorded. Via interview with the CME and survey staff, it is confirmed that 200 households are randomly selected from the 395,435 households list by the simple random sampling (SRS) method. The excel function "randbetween" is employed to choose the households sample group. The CME distributed the survey to local Rural Energy Offices, then the survey team of each town visited the households in the project sample group and collected data with the questionnaires.

The verification team checked the adoption of sampling size calculation equations and parameter calculation process of the monitoring parameters that applied with sampling approach.
For the sampling process of the CME, Via checking the CPA numbers of 200 samples against with the list of 395,435HHs, it is verified that the 200 samples cover 87 CPAs which including all CPAs (87).

It is able to confirm that the sampling approach was consistent with the latest EB requirements. Sampling type was properly selected, the required confidence/precision has been met, and the sampling size was corrected calculated, so that the selected samples were representative of the population.

Reliability Analysis

As a conservative approach, a sample size of 200 was chosen by the CME. In the monitoring report and relevant parameters were monitored and recorded. Reliability of the sample size was calculated by the CME. For the mean operation hours of each digester (*t*), relative error is calculated as 1.59%; for the annual average number of pigs ($N_{LT,y}$), relative error is calculated as 6.89%; for the annual consumption of fossil fuel type *j* coal (physical units, mass/volume) by application m ($FC_{m,j}$), relative error is calculated as 8.58%, respectively under the confidence level of 95%. All of them are below 10%. For the proportional parameters (Proper sludge application ratio), 100% sludge of each sampled digester has been applied in land application to avoid methane emissions; all the manure generated has been fed into biogas digesters directly ($MS\%_{i,y}$); 198 of all sampled 200 households digesters and biogas stoves have been inspected that 99% in operation ($n_{k,y}$), all 200 sampled households have coal stoves in use, in this case, the total number of coal stoves in use for all 87 CPAs in the monitoring period is 395,435 ($N_{m,y}$).

Via checking the Survey list of the 200 samples/17/, it is confirmed that the standard errors above are correctly calculated under the confidence level of 95%. Thus the monitoring of these parameters have met the confidence/precision of 95%/10%. Therefore, the sample size is reliable.

The verification team reviewed the MR, PoA-DD and included CPA-DDs, the other available data and documents such as the Survey list of the 200 samples/17/, the questionnaire papers/18/ filled by the households, and Table of checked and accepted documents/19/. Crosschecked with the inspection during the on-site period, including 85 random households visit. Verified whether the sample plan is reasonable to conduct and the implementation and results of the sample survey can be accepted.

Acceptance of Sampling

Using own professional judgement, it is assumed that the Acceptable Quality Level (AQL) is 1% and the Unacceptable Quality Level (UQL) is 10% for this PoA. The maximum error of producer's risk and consumer's risk is assumed at 5%, in compliance with the Standard for Sampling and Surveys for CDM Project Activities and Programme of Activities (hereafter referred to as the "sampling standard"). Based on these assumptions, the verification team refers to the sampling standard and sampling guideline and found that sample size should be not less than 61 and acceptance number is 2.

To be more conservative, before the on-site visit, CTI determined 85 as the sample size and randomly selected 65 from the survey list of the 200 samples, and randomly selected 20 from the Household list of 87 CPAs exclude 200 samples selected by CME. For the randomly selection of 65, a pre-randomized order of numbers ranging from 1-200 as calculated by Excel's RAND() function was brought to the field and a household list prepared in the field. If for example, the first number is 5, then the household name that was listed 5th on the household list would be the one to be surveyed.
For the randomly selection of another 20, a pre-randomized order of numbers ranging from 1-395,235 (395,435-200) as calculated by Excel's RAND() function was brought to the field and a household list prepared in the field. If for example, the first number is 10, then the household name that was listed 10th on the household list would be the one to be surveyed.

During on-site visit, 85 households (total sample size) were chosen by the verification team randomly to check the correctness of sampling size and data that need to be monitored. This is considered to be a good practice.
For the selected 65 from the survey list of the 200 samples, CTI checked the Acceptance as below table,

Parameter	Number of samples in MR	Number of samples by verification team	Acceptance number	Discrepant records	Acceptable or not
Annual consumption of fossil fuel type *j* coal (physical units, mass/volume) by application m ($FC_{m,j}$)	200	85 (65 for check the Acceptance)	2	0	Yes
Proportion of $N_{k,0}$ that remain operating at year y (fraction) ($n_{k,y}$)	200	85 (65 for check the Acceptance)	2	0	Yes
Number of thermal application m remaining in use in year y ($N_{m,y}$), m refers to coal stove	200	85 (65 for check the Acceptance)	2	0	Yes
Mean annual operation hours of the digesters (*t*)	200	85 (65 for check the Acceptance)	2	0	Yes
Annual average number of animals of type LT in year *y* ($N_{LT,y}$)	200	85 (65 for check the Acceptance)	2	2	Yes
Fraction of manure handled in project animal manure management system *i* (i.e. digestion in the newly installed biogas digester)	200	85 (65 for check the Acceptance)	2	0	Yes
Land application of digestate from biogas digesters to avoid anaerobic digestion (Proper sludge application ratio)	200	85 (65 for check the Acceptance)	2	0	Yes

As per the above table, for the parameters "Annual consumption of fossil fuel type *j* coal (physical units, mass/volume) by application m ($FC_{m,j}$)", "Proportion of $N_{k,0}$ that remain operating at year y (fraction) ($n_{k,y}$)", "Mean annual operation hours of the digesters (*t*)", "Fraction of manure handled in project animal manure management system *i* (i.e. digestion in the newly installed biogas digester)", "Land application of digestate from biogas digesters to avoid anaerobic digestion (Proper sludge application ratio)" result of CME's is consistent in the samples verified (cross-checked) by the verification team. For the parameter "Annual average number of animals of type LT in year *y* ($N_{LT,y}$)", 2 minor discrepancies are found separately as table shown below.

Parameter	PoA Unique No. of Household	Result from CME	Result from Verification team
Annual average number of animals of type LT in year y ($N_{LT,y}$)	"Dazhou-Dazhu-T20081105"	5	4
	"Dazhou-Dazhu-T20090068"	9	6

In all, it is observed that the number of discrepant records is equal to the acceptance number. Therefore, in accordance with paragraph 28 and 32 of the sampling standard/41/, it is able to confirm that the sample size and sampling result is acceptable.

To make sure the data would be well collected during on-site sampling, survey staffs were well trained before they start the collecting work. A copy of training material and training records/21/ were reviewed and verified by the verification team. Photos of the training courses/21/ were also supplied and it is able to confirm that the survey staffs were well trained before start working. When the survey staffs went to the households, questionnaire papers/18/ were supplied to the households and households are required to answer the questions on the questionnaire papers. After the questionnaire papers were filled, both survey staff and the households signed on the questionnaire papers. After all the households filled in such questionnaire papers, survey staff were required to fill a table, on which general information of each household are clearly included. Then the table were checked and confirmed by the SREO. The questionnaire papers/18/ and Table of checked and accepted documents/19/ were well preserved and supplied to the verification team during on-site verification.

The verification team has checked the questionnaire papers filled by the household users, table of checked and accepted documents, survey list of the 200 samples summarized by the CME. Furthermore, during on-site verification, the verification team has interviewed 25 survey staffs who conducted the sampling survey and confirmed that the survey was conducted based on the sampling plan and via checking the signatures of the survey staffs between the 200 questionnaire papers and on-site CTI form of personnel interviewed, it is confirmed that the signatures of the survey staffs are consistent. The verification team is able to confirm that the sampling process is reliable.

To ensure the data used in the calculation are correct, a QA/QC procedure was established by the CME including Supervisor Check, Data Entry, Data Check Algorithms and Analytical Checks.

Step 1: Supervisor Check
When the monitoring data was collected, the supervisor of the county reviewed all the questionnaires collected from each interviewer. Data on the questionnaires need to be subject to five kinds of checks: range checks (outlier data), checks against reference data, skip checks, consistency checks and typographic checks.

Step 2: Data Entry

A data entry program should be used with suspect range and logical consistency triggers. One simple solution is to set up a spreadsheet data entry template with validity check triggers.

Step 3: Data Check Algorithms
Project data management software was used to check for the inconsistencies, missing values, identification numbers, double data entry. One simple solution is to use sort and filter function of spreadsheet.

Step 4: Analytical Checks:
By basic descriptive statistics, the outliers could be easily figured out. Further statistical analysis can work more characteristics of the data by professional analysis tools.

The monitoring sampling data, both hard and soft copy, are stored carefully by CME within the whole crediting period. Two hardcopies of monitoring questionnaires need to be stored in CME offices in Beijing and Chengdu separately to avoid information missing. Via checking the data management procedure and archive records, the verification team is able to confirm that the QA/QC procedure is in place and working properly.

Conclusion

Based on the document review and on-site visit interviews, the verification team verifies that the registered monitoring plan is implemented as planned and confirms that the operational and management system is implemented as per the registered monitoring plan.
During the on-site visit the verification team was able to verify that monitoring organization structure and data collection procedure is in line with monitoring plan of the latest approved/included CPA-DDs and monitoring report. Moreover, the verification team has interviewed the 25 personnel who are working on the data collection and management and 85 household users that were randomly selected. The verification team verified certain documents, like Questionnaire papers that filled by the investigated households/18/, Table of checked and accepted documents for all constructed biogas digesters signed by local authority/19/, Survey list of the 200 samples/17/, Household list that included in each CPA (from CPA Nb. SCHHBG-2010-001 to CPA Nb. SCHHBG-2014-087)/28/, and Statement on the number of household equipped with biogas digester in this PoA (from CPA Nb. SCHHBG-2010-001 to CPA Nb. SCHHBG-2014-087)/26/. A monitoring mechanism which was established by the CME was found to be in place and working properly. Survey staffs were well trained/21/ before start working and a data management system were established for data management. QA/QC procedure was established to avoid misuse of invalid data.

It was verified that authorities and responsibilities for monitoring and reporting of all data related to the emission reductions were clearly defined for this monitoring period. Moreover, the biogas digesters in all the CPAs included in the PoA during this monitoring period were properly installed with the help of technicians/26-28/. Operation data were collected by well trained survey staff/21/. The frequency of monitoring, measurement, as well as reporting details were conducted as outlined in the monitoring plan available in the latest version of the CPA-DDs/10-13/.

D.5. Clarification requests, corrective action requests and forward action requests raised

Areas of verification findings	No. of CL	No. of CAR	No. of FAR
General			
Compliance of the monitoring report with the monitoring report form	-	1	-
Remaining forward action requests from validation and/or previous verification	-	-	-
CPA(s) considered for verification and covered in this report	-	-	-
Programme of activities			
Compliance of the programme implementation with the registered PoA-DD	-	-	-
Implementation and operation of the management system	-	-	-
Post-registration changes	-	-	-
• Temporary deviations from the registered monitoring plan, applied methodology or applied standardized baseline	-	-	-
• Corrections	-	-	-
• Inclusion of a monitoring plan	-	-	-
• Permanent changes to the registered monitoring plan or permanent deviation of monitoring from the applied methodology, standardized baseline or other applied standards or tools	-	-	-
• Changes to the programme design or project design	-	-	-
• Change of coordinating/managing entity	-	-	-
• Changes specific to afforestation and reforestation activities	-	-	-
Component project activities			
Compliance of the CPA implementation with the included CPA design document	-	-	-
Post-registration changes	-	-	-
• Temporary deviations from registered monitoring plan, applied methodology or applied standardized baseline	-	-	-
• Corrections	-	-	-
• Changes to the start date of the crediting period of component project activities	-	-	-
• Inclusion of a monitoring plan	-	-	-
• Permanent changes to the registered monitoring plan or permanent deviation of monitoring from the applied methodology, standardized baseline or other applied standards or tools	-	-	-
• Changes to the programme design of project design	-	-	-
• Changes specific to afforestation and reforestation component project activities	-	-	-
Compliance of the registered monitoring plan with the methodology including applicable tool(s) and standardized baseline	-	-	-
Compliance of monitoring activities with the registered monitoring plan	-	-	-
• Data and parameters fixed ex ante or at renewal of crediting period	-	-	-
• Data and parameters monitored	-	2	-

• Implementation of sampling plan	-	1	-
Compliance with the calibration frequency requirements for measuring instruments	-	-	-
Stakeholder inputs and legal disputes	-	1	-
Calculation of SDG outcomes	-	-	-
• Calculation of baseline value or estimation of baseline situation of each SDG outcome	-	-	-
• Calculation of project value or estimation of project situation of each SDG outcome	-	-	-
• Calculation of leakage GHG emissions	-	-	-
• Calculation of net benefits as difference of baseline and project values or direct calculation for each SDG outcome	-	-	-
• Summary of ex-post values of each SDG outcome for the current monitoring period	-	1	-
• Comparison of actual value of outcomes with estimates in approved PDD	-	1	-
• Remarks on difference from estimated value in included CPA	-	-	-
Total	**0**	**7**	**0**

SECTION E. Verification findings

E.1. General

E.1.1. Compliance of the monitoring report with the monitoring report form

Means of verification	According to para 338&339 of VVS for PoA version 02.0 and Gold Standard for the Global Goals Principles and Requirements/66/, the verification team crosschecked and compared the MR by employing the valid version of the applicable monitoring report form listed in GS website. - The MR used the latest valid version of the applicable at GS website. - The MR is completed and meets all relevant requirements of instructions for filling out the Gold standard for the global goals Monitoring report (version 1, June 2017) for GS project or programme activity.
Findings	**CAR 01** (Refer to Appendix 4)
Conclusion	CAR 01 are closed. Refer to Appendix 4 for findings' resolution. As per requirement of VVS for PoA Version 02.0 and Gold Standard for the Global Goals Principles and Requirements/66/, based on the findings above, it is confirmed that the MR version 2 was in compliance with relevant valid version of monitoring report form and instructions therein for filling out GS MR.

E.1.2. Remaining forward action requests from validation and/or previous verifications

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This is the 7th periodic verification of the PoA. There is no FAR from previous verifications via checking the previous verification reports/52-55,69/.

E.1.3. CPAs considered for verification and covered in this report

Title and UNFCCC reference number of the CPA included in the PoA as of the end of this monitoring period	Title and GS reference number of the CPA included in the PoA as of the end of this monitoring period	Is the CPA considered for this verification? (yes/no)	The date when the CPA was included	Version of the PoA-DD	Confirmation that a request for issuance including the CPA has been published for the previous monitoring period (Y/N)
2898-0001	GS1288	Yes	11/04/2012	2	Y
2898-0002	GS1693	Yes	11/04/2013	2	Y
2898-0003	GS1694	Yes	11/04/2013	2	Y
2898-0004	GS1695	Yes	11/04/2013	2	Y
2898-0005	GS1696	Yes	11/04/2013	2	Y
2898-0006	GS1697	Yes	11/04/2013	2	Y
2898-0007	GS1698	Yes	11/04/2013	2	Y
2898-0008	GS1699	Yes	11/04/2013	2	Y
2898-0009	GS1700	Yes	11/04/2013	2	Y
2898-0010	GS1701	Yes	11/04/2013	2	Y
2898-0011	GS1702	Yes	11/04/2013	2	Y
2898-0012	GS1703	Yes	11/04/2013	2	Y
2898-0013	GS1704	Yes	11/04/2013	2	Y
2898-0014	GS1705	Yes	11/04/2013	2	Y
2898-0015	GS1706	Yes	11/04/2013	2	Y
2898-0016	GS1707	Yes	11/04/2013	2	Y
2898-0017	GS1708	Yes	11/04/2013	2	Y
2898-0018	GS1709	Yes	11/04/2013	2	Y
2898-0019	GS1710	Yes	11/04/2013	2	Y
2898-0020	GS1711	Yes	11/04/2013	2	Y
2898-0021	GS1712	Yes	11/04/2013	2	Y
2898-0022	GS1713	Yes	11/04/2013	2	Y
2898-0023	GS1714	Yes	11/04/2013	2	Y
2898-0024	GS1715	Yes	11/04/2013	2	Y
2898-0025	GS1716	Yes	11/04/2013	2	Y
2898-0026	GS1717	Yes	11/04/2013	2	Y
2898-0027	GS1718	Yes	11/04/2013	2	Y
2898-0028	GS1719	Yes	11/04/2013	2	Y
2898-0029	GS1720	Yes	11/04/2013	2	Y
2898-0030	GS1721	Yes	11/04/2013	2	Y
2898-0031	GS1722	Yes	11/04/2013	2	Y
2898-0032	GS1723	Yes	11/04/2013	2	Y
2898-0033	GS1724	Yes	11/04/2013	2	Y
2898-0034	GS1725	Yes	11/04/2013	2	Y
2898-0035	GS1726	Yes	11/04/2013	2	Y
2898-0036	GS1727	Yes	11/04/2013	2	Y
2898-0037	GS1728	Yes	11/04/2013	2	Y
2898-0038	GS1730	Yes	11/04/2013	2	Y
2898-0039	GS1731	Yes	11/04/2013	2	Y

2898-0040	GS1732	Yes	11/04/2013	2	Y
2898-0041	GS1733	Yes	11/04/2013	2	Y
2898-0042	GS1734	Yes	11/04/2013	2	Y
2898-0043	GS1735	Yes	11/04/2013	2	Y
2898-0044	GS1736	Yes	11/04/2013	2	Y
2898-0045	GS1737	Yes	11/04/2013	2	Y
2898-0046	GS1738	Yes	11/04/2013	2	Y
2898-0047	GS1739	Yes	11/04/2013	2	Y
2898-0048	GS1740	Yes	11/04/2013	2	Y
2898-0049	GS1741	Yes	11/04/2013	2	Y
2898-0050	GS1742	Yes	11/04/2013	2	Y
2898-0051	GS1743	Yes	11/04/2013	2	Y
2898-0052	GS1744	Yes	11/04/2013	2	Y
2898-0053	GS1745	Yes	11/04/2013	2	Y
2898-0054	GS2566	Yes	24/03/2014	2	Y
2898-0055	GS2567	Yes	24/03/2014	2	Y
2898-0056	GS2568	Yes	24/03/2014	2	Y
2898-0057	GS2569	Yes	24/03/2014	2	Y
2898-0058	GS2570	Yes	24/03/2014	2	Y
2898-0059	GS2571	Yes	24/03/2014	2	Y
2898-0060	GS2572	Yes	24/03/2014	2	Y
2898-0061	GS2573	Yes	24/03/2014	2	Y
2898-0062	GS2574	Yes	24/03/2014	2	Y
2898-0063	GS2575	Yes	24/03/2014	2	Y
2898-0064	GS2576	Yes	24/03/2014	2	Y
2898-0065	GS2577	Yes	24/03/2014	2	Y
2898-0066	GS2578	Yes	24/03/2014	2	Y
2898-0067	GS2579	Yes	24/03/2014	2	Y
2898-0068	GS2580	Yes	24/03/2014	2	Y
2898-0069	GS2581	Yes	24/03/2014	2	Y
2898-0070	GS2582	Yes	24/03/2014	2	Y
2898-0071	GS2583	Yes	24/03/2014	2	Y
2898-0072	GS2584	Yes	24/03/2014	2	Y
2898-0073	GS2585	Yes	24/03/2014	2	Y
2898-0074	GS3588	Yes	29/01/2015	2	Y
2898-0075	GS3589	Yes	29/01/2015	2	Y
2898-0076	GS3590	Yes	29/01/2015	2	Y
2898-0077	GS3591	Yes	29/01/2015	2	Y
2898-0078	GS3592	Yes	29/01/2015	2	Y
2898-0079	GS3593	Yes	29/01/2015	2	Y
2898-0080	GS3594	Yes	29/01/2015	2	Y
2898-0081	GS3595	Yes	29/01/2015	2	Y
2898-0082	GS3596	Yes	29/01/2015	2	Y
2898-0083	GS3597	Yes	29/01/2015	2	Y
2898-0084	GS3598	Yes	29/01/2015	2	Y
2898-0085	GS3599	Yes	29/01/2015	2	Y
2898-0086	GS3600	Yes	29/01/2015	2	Y
2898-0087	GS3601	Yes	29/01/2015	2	Y

E.2. Programme of activities

E.2.1. Compliance of the programme implementation with the registered programme design document

Means of verification	According to VVS version for PoA 02.0 and Gold Standard for the Global Goals Principles and Requirements/66/, CTI conducted an on-site inspection (22/07/2019-31/07/2019)/58/ to assess that all physical features (technology, project equipment, and monitoring procedures) of the included CDM CPA in the registered PoA-DD and CPA-DDs are in places and the CME have operated the PoA as per the PoA-DD. It was found that: The PoA aims to reduce a large amount of greenhouse gases (GHG) by facilitating the installation of a large number of household biogas digesters for the low-income households located in Sichuan province, P. R. China. During this 7th monitoring period 01/01/2018 – 31/12/2018, 87 CPAs were included and 395,435 households were equipped with the biogas digesters in Yibin, Neijiang, Suining, Ziyang, Zigong, Luzhou, Leshan, Meishan, Mianyang, Guang'An, Ganzi, Aba and Dazhou, all of which are located in Sichuan province. In this monitoring period quantities of the included CPAs and households are not changed. Prior to the project activity, households in the area which are now covered by PoA stored animal manure produced by micro-scale animal husbandries in deep pits for several months before applying it to their farmland. In the meantime, coal was used as source of energy for cooking in daily life. This is the baseline scenario. Through the project activity, each household is equipped with a household biogas digester that treats the manure anaerobically and recovers the generated methane as energy supply, which will avoid methane emission and reduce coal consumption. The Sichuan Rural Energy Office (SREO) is the local authority while Chengdu Oasis Science & Technology Co., Ltd. is the coordinating/managing entity (CME), who will take the entire task regarding the monitoring issues. Based on the previous verification and during on-site inspection, the verification team checked the Table of checked and accepted documents/19/ and statement on the household number and operation date issued by the SREO/26/ and is able to confirm that the local authority and CPAs implementer is SREO, CME is the Chengdu Oasis Science & Technology Co., Ltd, taking care of all investigation and monitoring data review work. During this monitoring period, a new statement on the existing total household number/27/ as well as the number included in each CPA were issued by the SREO. In the statement, SREO confirmed that in this monitoring period the number of included CPAs and included households was not changed (same as the previous monitoring period). Moreover, during the on-site verification a full list of the households equipped with biogas digesters were verified by verification team, on which name, digester ID, digester location, and construction date were clearly indicated. Table of checked and accepted documents for all constructed biogas digesters/19/ were also randomly checked and it is able to confirm it is accepted by the local authority. Through checking above mentioned documents, the verification team is able to confirm that the total number of household equipped with biogas digester is 395,435 and the households included in each CPA are not changed, which is consistent with the monitoring report. The verification team also checked construction time of all the digesters on the Household list/28/ that included in each CPA (from CPA Nb. SCHHBG-2010-001 to CPA Nb. SCHHBG-2014-087) and confirmed that the earliest construction date of CPA Nb. SCHHBG-2010-001 is 10/12/2010, which is consistent with the latest approved CPA-DDs/10/. The verification team also checked the Household list of CPA Nb. SCHHBG-2012-002 to CPA Nb. SCHHBG-2013-073/11-12/ and confirmed that the earliest construction date of biogas digester is no earlier than 28/10/2010. It is consistent with the CPA-DDs of CPA Nb. SCHHBG-2012-002 to CPA Nb. SCHHBG-2013-073/11-12/. The verification team also checked the Household list of

	CPA Nb. SCHHBG-2014-074 to CPA Nb. SCHHBG-2014-087[/13/] and confirmed that the earliest construction date of biogas digester is no earlier than 29/10/2010. It is consistent with the CPA-DDs of CPA Nb. SCHHBG-2014-074 to CPA Nb. SCHHBG-2014-087[/13/]. Construction of all CPAs (from CPA Nb. SCHHBG-2010-001 to CPA Nb. SCHHBG-2014-087) finished and started operation before 04/09/2014[/10-13/]. Verification team checked the Household list that included in each CPA and able to confirm the information on construction date given in the MR is correct. During on-site visit, the verification team checked the biogas digesters equipped in each sampled household. Each biogas digester system consists of components such as inlet, inlet pipe, fermentation chamber, gas chamber storage, hydraulic chamber, movable cover and gas tube. Verification team is able to confirm that the systems were equipped in line with the registered PoA-DD and CPA-DD. The digesters were designed according to relevant regulations, checked and accepted by local authority[/19/]. Therefore, based on this on-site visit and the reviewed project documentation, the verification team confirms that the realized technology, the project equipment, included CPA and household number, as well as the CME name/responsibility are consistent with the description in the registered or included CPA-DDs. There is no information (data and variables) provided in the monitoring report that is different from that stated in the registered PoA-DD and CPA-DD.
Findings	N/A
Conclusion	According to para 340&342 of VVS for PoA version 02.0 and Gold Standard for the Global Goals Principles and Requirements[/66/], it is confirmed that the implementation and operation of the PoA and included CPAs has been conducted in accordance with the description contained in the latest approved PoA-DD and CPA-DDs; There is no deviation or the proposed or actual changes in the implementation or operation of the PoA and CPA comply with the requirements of the Project standard. All physical features (technology, project equipment, and monitoring procedures) of the included CPAs specified in the included CPA-DDs are in place and that the CME has operated the registered CDM PoA and included CPAs as per the latest approved PoA-DD and CPA-DDs.

E.2.2. Implementation and operation of the management system

Means of verification	According to VVS for PoA version 02.0 and Gold Standard for the Global Goals Principles and Requirements[/66/], the verification team conducted documents review and on-site interview to assess implementation and operation of the management system included CDM CPA in the PoA are consistent with the latest approved PoA-DD and CPA-DDs. To make sure the monitoring procedure working properly, a monitoring structure was established. Two organizations were working on the monitoring ➢ Work of this PoA. SREO is local authority and CPAs implementer, Chengdu Oasis Science & Technology Co., Ltd is CME, and in charge of all tasks related to CDM and PoA, including determining the households to be included in the sampling survey using a simple random approach, submits the household references to the local data collectors, and the whole process of data management. ➢ The data collection and management process are operated as below: i. A central online platform was established and the CME could use the platform to determine the households to be included in the sampling using a simple random approach and submits the household references to the local data collectors. ii. Well trained local officers of SREO visited the households. Data collected was uploaded to the platform after the site visit. Using this platform, data could be transferred back to the CME for the calculation of the emission reduction.

	iii. Data collected would be then analysed by an automatic database system, and outcome of the sampling survey would be used to calculate the emission reduction of each CPA during a certain monitoring period. Monitoring report could be prepared base on the data acquired. During on-site inspection, data management system was checked by the verification team. Operation manual of the data management system was supplied to the verification team[/24/]. Therefore, it is able to confirm that the data management system was properly designed and operated, and operation manual was well followed. Both platforms, the web-interface for the local data collectors as well as the emission reduction calculation software are saved in a backup system regularly, it is able to confirm that all data acquired within this data recording system will be kept at least until two years after the end of the crediting period of the PoA. This is verified by on-site inspection.
Findings	N/A
Conclusion	In conclusion, based on document review, and stakeholder interview, together based on verification team's local and sectoral expertise, it is confirmed that: The implementation and operation of the management system included in the latest approved PoA-DD and CPA-DDs are consistent with the actual PoA implementation and operation situation.

E.2.3. Post-registration changes

E.2.3.1. Temporary deviations from the registered monitoring plan, applied methodology or applied standardized baseline

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N/A

E.2.3.2. Corrections

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- **Corrections that have been approved prior to this monitoring period;**
- There is no correction observed to PoA approved prior to this monitoring period.
  A correction was made for CPA 2898-0002 to CPA 2898-0053 during the first verification on the monitoring period (10/05/2012 – 05/06/2013).

- **Corrections that have been approved during this monitoring period.**
  There is no correction observed during this monitoring period.
  There is no correction submitted with this monitoring report as part of the request for issuance.

E.2.3.3. Inclusion of a monitoring plan

>>
N/A

E.2.3.4. Permanent changes to the registered monitoring plan or permanent deviation of monitoring from the applied methodology, standardized baseline or other applied standards or tools

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- **Permanent changes that have been approved prior to this monitoring period;**
  The PoA voluntary changes AMS-I.C. (version 19) to AMS-I.I. (version 04). This post-registration change (PRC ref no: PRC-2898-001) has been approved by EB on 11/12/2017.

  Based on the post-registration change, Monitoring parameters have been changed in PoA-DD:

Fixed parameters $FC_{BL,y}$ and $FC_{PE,y}$ have been moved to be monitoring parameters $FC_{BL,k,j}$ and $FC_{m,j}$ in line with the AMS-I.I. Furthermore, additional monitoring parameters $N_{k,o}$, $n_{k,y}$ (formerly N_k), $N_{m,y}$ & $MS_{\%i,y}$ have been added in line with the new methodology AMS-I.I (version 04).
The details can be found in http://cdm.unfccc.int/PRCContainer/DB/prcp617554437/view

- **Permanent Changes that are being submitted with this monitoring report as part of the request for issuance (post-registration change - issuance track).**
  There is no Permanent changes to the registered monitoring plan or permanent deviation of monitoring from the applied methodology, standardized baseline or other applied standards or tools observed during this monitoring period.

E.2.3.5. Changes to the programme design or project design

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- **Changes to the programme design that have been approved prior to this monitoring period;**
  The PoA voluntary changes AMS-I.C. (version 19) to AMS-I.I. (version 04). This post-registration change (PRC ref no: PRC-2898-001) has been approved by EB on 11/12/2017.
  Eligibility criteria for inclusion of CPAs in the PoA is updated to include the applicability conditions of AMS-I.I (instead of applicability conditions of AMS-I.C in the registered PoA DD and CPA DD), the remaining criteria is not affected.
  The details can be found in http://cdm.unfccc.int/PRCContainer/DB/prcp617554437/view

- **Changes that are being submitted with this monitoring report as part of the request for issuance (post-registration change - issuance track).**
  There is no Changes to the programme design observed during this monitoring period.

E.2.3.6. Change of coordination/managing entity

>>
N/A

E.2.3.7. Changes specific to afforestation and reforestation activities

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N/A

E.3. Component project activities

E.3.1. Compliance of the CPA implementation with the included CPA design document

Means of verification	According to VVS for PoA version 02.0 and Gold Standard for the Global Goals Principles and Requirements[/66/], the verification team conducted an on-site inspection from 22/07/2019 to 31/07/2019 to assess that all physical features (technology, project equipment, and monitoring procedures) of the included CDM CPAs in this monitoring period are in places and the CME and CPAs implementer have operated the CPA as per the latest approved PoA-DD and CPA- DDs. During on-site visit, the verification team checked the biogas digesters equipped in each sampled household. Each biogas digester system consists of components such as inlet, inlet pipe, fermentation chamber, gas chamber storage, hydraulic chamber, movable cover and gas tube. Verification team is able to confirm that the systems were equipped in line with the latest approved CPA-DDs. The digesters

	were designed according to relevant regulations, checked and accepted by local authority[19]. Therefore, based on this on-site visit and the reviewed project documentation, the verification team confirms that the realized technology, the project equipment, included CPA and household number, as well as the CME name/responsibility are consistent with the description in the CPA design document. During this monitoring period a new statement on the existing total household number as well as the number included in each CPA were issued by the SREO[27]. In the statement, SREO confirmed that in this monitoring period the number of included CPAs and included households was not changed (same as the registration and inclusion process). Moreover, during the on-site verification, a full list of the households equipped with biogas digesters[28] were verified by verification team on which name, digester ID, digester location, and construction date were clearly indicated. Table of checked and accepted documents for all constructed biogas digesters[19] were also randomly checked and verification team able to confirm that it is accepted by the local authority. Through checking above mentioned documents, it is able to confirm that the total number of household equipped with biogas digester is 395,435 and the households included in each CPA are not changed, which is consistent with the latest approved CPA-DDs.
Findings	N/A
Conclusion	In conclusion, based on document review, and stakeholder interview, together based on verification team's local and sectoral expertise, it is confirmed that: The implementation and operation of the registered CPA has been conducted in accordance with the description contained in the latest approved PoA-DD and CPA-DDs; There is no deviation or the proposed or actual changes in the implementation or operation of the registered/included CPA comply with the requirements of the Project Standard. The actual CPA implementation is in line with latest approved CPA-DDs and situation of previous monitoring periods[52-55].

E.3.2. Post-registration changes

E.3.2.1. Temporary deviations from registered monitoring plan, applied methodology or applied standardized baseline

>>
N/A

E.3.2.2. Corrections

>>

- **Corrections that have been approved prior to this monitoring period;**
  A correction was made for CPA 2898-0002 to CPA 2898-0053 during the first verification on the monitoring period (10/05/2012 – 05/06/2013).
  PRC reason: The parameter $FC_{BL,y}$ and $FC_{PE,y}$ in the CPA-DDs of CPA 2898-0002 to CPA 2898-0053 should be the total coal consumption before and after installation for all the households in the entire CPA, but it was wrongly indicated as the average coal consumption per household in the original registered CPA-DDs. Therefore, a correction in the CPA-DDs of 2898-0002 to 2898-0053 was made, the value of $FC_{BL,y}$ and $FC_{PE,y}$ was corrected as the absolute coal consumption in the entire CPA.
  And the correction as a post-registration change was approved on 03/01/2014.
  In addition, above fixed parameters $FC_{BL,y}$ and $FC_{PE,y}$ have been moved to be monitoring parameters $FC_{BL,k,j}$ and $FC_{m,j}$ in line with the latest applied methodology AMS-I.I (version 04).

- **Corrections that have been approved during this monitoring period.**
  There is no correction observed during this monitoring period.

E.3.2.3. Changes to the start date of the crediting period of component project activities

>>
N/A

E.3.2.4. Inclusion of a monitoring plan

>>
N/A

E.3.2.5. Permanent changes to the registered monitoring plan or permanent deviation of monitoring from the applied methodology, standardized baseline, or other applied standards or tools

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- **Permanent changes that have been approved prior to this monitoring period;**
  The PoA voluntary changes AMS-I.C. (version 19) to AMS-I.I. (version 04). This post-registration change (PRC ref no: PRC-2898-001) has been approved by EB on 11/12/2017.

  Based on the post-registration change, Monitoring parameters have been changed in CPA-DDs:

  Fixed parameters $FC_{BL,y}$ and $FC_{PE,y}$ have been moved to be monitoring parameters $FC_{BL,k,j}$ and $FC_{m,j}$ in line with the AMS-I.I. Furthermore, additional monitoring parameters $N_{k,o}$, $n_{k,y}$ (formerly N_k), $N_{m,y}$ & $MS_{\%i,y}$ have been added in line with the new methodology AMS-I.I (version 04).
  The details can be found in http://cdm.unfccc.int/PRCContainer/DB/prcp617554437/view

- **Permanent changes that have been approved during this monitoring period.**
  There is no Permanent changes to the registered monitoring plan or permanent deviation of monitoring from the applied methodology, standardized baseline or other applied standards or tools observed during this monitoring period.

E.3.2.6. Changes to the programme design or project design

>>

- **Changes to the programme design that have been approved prior to this monitoring period;**
  The PoA voluntary changes AMS-I.C. (version 19) to AMS-I.I. (version 04). This post-registration change (PRC ref no: PRC-2898-001) has been approved by EB on 11/12/2017.
  Eligibility criteria for inclusion of CPAs in the PoA is updated to include the applicability conditions of AMS-I.I (instead of applicability conditions of AMS-I.C in the registered PoA DD and CPA DD), the remaining criteria is not affected.
  The details can be found in http://cdm.unfccc.int/PRCContainer/DB/prcp617554437/view

- **Changes to the programme design that have been approved during this monitoring period.**
  There is no Changes to the programme design observed during this monitoring period.

E.3.2.7. Changes specific to afforestation and reforestation component project activities

>>
N/A

E.3.3. Compliance of the registered monitoring plan with the methodology including applicable tool(s) and standardized baseline

Means of verification	According to VVS for PoA version 02.0 para. 343 to 345 and Gold Standard for the Global Goals Principles and Requirements[/66/], the verification team conducted verification of compliance of monitoring plan with the monitoring methodology including applicable tool and standardized baseline. During the document review and furthermore during the on-site visit, the verification team has reviewed the registered monitoring plan and compared it with the applied methodology to verify their compliance. The verification team conducted the documents review including validation report, PRC assessment, latest approved PoA-DD, each latest approved CPA-DDs, previous verification reports and their related monitoring reports. Via checking the latest approved CPA-DDs, it is confirmed that the CPAs apply the monitoring methodology AMS-I.I.– *Biogas/biomass thermal applications for households/small users* (version 04) and AMS-III.R.– *Methane recovery in agricultural activities at household/small farm level* (version 02). The actual procedures followed for monitoring of parameters are checked against the parameters and procedures provided in the respective applied methodologies. All parameters stated in the monitoring plan and the applied methodology has been fulfilled in the current monitoring report. All baseline/project emission parameters has been verified and found satisfactory. To verify the validity of the data/parameters, the verification team checked the parameters one by one, comparing the data in MR and the inspection findings during the site-visit, the discussion regarding each parameter has been elaborated in the further sections of this report. The monitoring plan as mentioned in the respective validated CPA-DD is in accordance with the applied methodology. Implementation of sampling plan was conducted by applying 95/10 confidence/precision, according to the "Standard For Sampling And Surveys For CDM Project Activities And Programme Of Activities"[/41/]. The sampling procedures are confirmed in compliance with the requirement of representative sampling methods in the applied monitoring methodology AMS-I.I.– Biogas/biomass thermal applications for households/small users (version 04) (refer to section D.4 above for detailed assessment).
Findings	N/A
Conclusion	According to the VVS for PoA Version 02.0 and Gold Standard for the Global Goals Principles and Requirements[/66/], the verification team confirms that: The monitoring plan of the registered/included CPAs is in compliance with the approved monitoring methodologies (AMS-I.I, version 04 and AMS-III.R, version 02)[/32,33/] including applicable tool(s). There is no applicable standardized baseline according to the latest approved PoA-DD and included CPA-DDs.

E.3.4. Compliance of monitoring activities with the registered monitoring plan

E.3.4.1. Data and parameters fixed ex ante or at renewal of crediting period

Means of verification	The documents review and the site visit revealed that a complete set of data for the specified monitoring period is available. The correctness of information provided in the monitoring report has been crosschecked against the latest approved PoA- DD and/or included CPA-DDs. The following ex-ante parameters have been checked the compliance with the latest approved monitoring plan.

Parameter	Unit	Applied Value and Assessment
SDG 13: Climate	kg dry	The applied value derived from the 2006 IPCC

	Action $VS_{LT,y}$ - Daily volatile solid excreted per animal	matter animal^{-1} year^{-1}	Guidelines for National Greenhouse Gas Inventories/44/, Volume 4, and Chapter 10, Table 10A-7 (swine), the value for the daily solid excreted by Asian swines multiplied with 365 days in a year (=0.3*365 kg dry matter animal^{-1} year^{-1}). Value is 109.5.
	SDG 13: Climate Action $B_{0,LT}$ - Maximum methane producing capacity for manure produced by livestock, of VS excreted.	m^3CH_4 kg^{-1}	The applied value derived from the 2006 IPCC Guidelines for National Greenhouse Gas Inventories/44/, Volume 4, and Chapter 10, Table 10A-7 (swine). Conservative standard value for Asian swine is applied for all animals in the calculations of emission reduction of the proposed PoA. Value is 0.29.
	SDG 13: Climate Action GWP_{CH4} - Global warming potential for CH_4.	1	In this monitoring period global warming potential for CH_4 is 25 according to para. 66 of EB69 meeting report "the Board agreed that the second commitment period global warming potentials (GWPs) shall apply to all calculations of emissions reductions or removals achieved from 01/012013"/39/. Value is 25.
	SDG 13: Climate Action D_{CH4} - Conversion factor of m^3CH_4 to kilogram CH_4.	kg/m^3	The applied value derived from the 2006 IPCC guidelines/44/, Volume 4, Chapter 10, Page 10.42. Value is 0.67.
	SDG 13: Climate Action UF_b - Model correction factor to account for model uncertainties	-	The applied value derived from the referred methodology AMS-III.D (version 17). Value is 0.94.
Findings	N/A		
Conclusion	According to VVS for PoA version 02.0 and Gold Standard for the Global Goals Principles and Requirements/66/ and based on the verification team's local and sectorial knowledge, the verification team confirms that: All the ex-ante parameters have been correctly mentioned and justified in section E.1 of the MR and correctly applied in the ER calculation process/15/. The information of data and parameters fixed ex ante provided in the monitoring report is compliance with the latest approved PoA-DD and the latest approved CPA-DDs.		

E.3.4.2. Data and parameters monitored

Means of verification	In accordance with PS for PoA (version 02.0), VVS for PoA (version 02.0), sample standard/guideline and applied methodologies included the applied tools, the verification team reviewed the MR, latest approved PoA-DD and included CPA-DDs, crosschecked against the other available data and documents, verified whether monitored parameters in accordance with all relevant applicable requirements in the PS; whether the MR list all data and parameters to be monitored, as required by the applied methodologies (AMS-I.I. and AMS-III.R.) and whether the data and parameters obtained in a reasonable way, whether the sample plan conducted accordingly, the source and the applied value of the monitored parameter is acceptable; whether the parameters monitored explain the operational and management structure, responsibilities and institutional arrangement for data collection/archiving, QA/QC procedures. The information flow and the values in the monitoring report were verified as

follows:

Parameter	Value used	Assessment
SDG 13: Climate Action $FC_{BL,k,j}$ - Annual consumption of baseline fossil fuel j	0.987*0.89 Tonnes	The value of this parameter is sourced from a comprehensive baseline survey of targeted households prior to the installation/commissioning conducted in June, 2010[/29/]. Via checking this representative sample survey[/29/] against the latest approved PoA-DD, it is confirmed that the mean value of $FC_{BL,k,j}$ is 0.987t. The relative error is 1.51% at the 95% confidence level. The value obtained 0.987t will multiply by 0.89 to account for uncertainties, i.e. 0.987t *0.89. As per paragraph 10(a) AMS-I.I (version 04). The value is fixed ex ante in the whole crediting period of each CPA in the CPA-DD. Furthermore, during on-site interviewed with households on a random sampling basis, it is confirmed that the main baseline fuel type is coal and annual baseline fuel consumption is 0.999t which is higher than the ex-ante value of 0.987t, hence, it is verified that the value used for ER calculation is conservative.
SDG 13: Climate Action $FC_{m,j}$ - Annual consumption of fossil fuel type j (physical units, mass/volume) by application m	0.02643*1.12 Tonnes of coal	In accordance with the latest approved PoA-DD and CPA-DDs, as there is only coal as fossil fuel involved, the value of *j* is 1. Data has been sourced from a monitoring survey of targeted households after the installation/commissioning of the project equipment dated in Apr - May 2019[/17/] for this monitoring period. In order to determine the value of $FC_{m,j}$ during this monitoring period, CME have followed sampling approach and randomly selected 200 households for interview. The information obtained from household interviews has been recorded in the form of questionnaire papers. Well trained survey staffs were in charge of collecting and recording the information from the questionnaire papers. The information collected by the survey staffs has been supplied to Chengdu Oasis Science &

				Technology Co., Ltd. (the CME) and data was transferred to automatic database system to determine the value of this parameter. Survey list of the 200 samples/17/ and the questionnaire papers filled by the households/18/ were provided to the verification team. Via checking the above evidence, it is confirmed that the mean value is 0.02643 t. The relative error is 8.58% at the 95% confidence level which is in line with the relevant requirements for sampling in the latest standard for sampling and surveys using a 95% confidence interval and a 10% margin of error. The value obtained 0.02643 t will multiply by 1.12 to account for uncertainties, i.e. 0.02643 t *1.12. This survey was conducted annually. The value obtained is multiplied by 1.12 to account for uncertainties. The verification team has also visited 85 of the households on a random sampling basis and interviewed the users during on-site inspection. Via the data gathered and calculated by verification team, it is confirmed that mean value is 0.02427t which is lower than the value in MR used for PE calculation, hence it is confirmed that the value in MR is conservative. Based on the result of acceptance sampling, the monitoring records are deemed acceptable in accordance with the sampling standard. As per paragraph 11 of AMS-I.I (version 04), the difference between $FC_{BL,k,j}$ and $FC_{m,j}$ have to be cross-checked with biogas generation estimated as per relevant national standard. Via checking the "National rural biogas project construction plan (2006-2010)"/46/, it is confirmed that one $8m^3$ biogas digester would generate biogas $385m^3$ annually, the heat efficiency of biogas stove is confirmed above 55% through checking GB/T

			3606-2001 (Domestic Biogas Stove)[/45/], the heat efficiency of coal stove is confirmed as 20% via verify the Coal stove test report[/59/]. The NCV of coal is 5,000 kcal per kg via the China Energy Statistics Yearbook 2016[/61/], while the NCV of biogas is also 5,000 kcal per m^3 via China Energy Statistics Yearbook 2016[/61/]. Therefore, The amount of coal replacement is calculated as: 385m^3 * 5,000kcal/m^3 * 55% / (5,000kcal/kg * 20%) = 1,058.75kg Hence, it is concluded that this value is larger than the coal replacement with biogas in this monitoring period (852 kg), it is confirmed that the value of 852 kg is reasonable, thus the value of 0.02643 t is verified as reasonable used for the ER calculation.
	SDG 13: Climate Action $N_{k,0}$ - Number of thermal applications k commissioned	2898-0001: 1,000 2898-0073: 3,350 All other CPAs: 4,601 The total number for the 87 CPAs during this monitoring period is 395,435.	After the installation of the bio-digesters and biogas stoves, they have been inspected as acceptance testing (commissioning) for proper operation in compliance with specifications. The acceptance check date of each sub-system has been recorded. Via checking the Commission record[/25/], it is confirmed that the total number for the 87 CPAs of this monitoring period is 395,435, including: CPA Nb. 2898-0001: 1,000; CPA Nb. 2898-0073: 3,350; All other CPAs: 4,601
	SDG 13: Climate Action $n_{k,y}$ - Proportion of $N_{k,0}$ that remain operating at year *y* (fraction)	99%	Via checking the registered CPA-DDs, it is confirmed that source of Proportion of $N_{k,0}$ that remain operating at year y (fraction) is by monitoring sampling study. As per the request in CPA-DDs, the CME has inspected if the biogas units are operational and in compliance with the required maintenance procedures from the manufacturers during this monitoring period through a statistically valid sample of the households. Via checking the Survey list of the 200 samples[/17/], the questionnaire papers filled by the households[/18/], it is confirmed

			that 198 of all sampled 200 biogas digesters and stoves were operational and in compliance with the required maintenance procedures from the manufacturers during this monitoring period. During the on-site, CTI verified the maintenance records of biogas digesters and cook stoves issued by biogas technicians/64/, and interviewed with biogas technicians, it is confirmed that systems were operated in compliance with manufacturer required maintenance at least once every two years (biennial). Furthermore, CTI interviewed 200 sampled HH about the maintenance situations during this monitoring period and confirmed that the 198 HHs' biogas digesters and stoves maintenance were conducted by biogas technicians in compliance with the required maintenance procedures from the manufacturers. CTI also checked the maintenance procedures from the manufacturers/67/ and Sichuan Provincial regulation of "The regulation of using and management on rural household biogas digester (DB51/T 807-2008)"/68/, it is verified that the maintenance records are in line with the requirements of the manufacturer and local regulation. Besides, in order to determine the number of systems operating in each CPA, CME have followed sampling approach and randomly selected 200 households for interview. The information obtained from household interviews has been recorded in the form of questionnaire papers. Well trained survey staffs were in charge of collecting and recording the information from the questionnaire papers. The information collected by the survey staffs has been supplied to Chengdu Oasis Science & Technology Co., Ltd. (the CME) and data was transferred to

				automatic database system to determine the value of this parameter. Survey list of the 200 samples/17/, the questionnaire papers filled by the households/18/, and Table of checked and accepted documents/19/ were provided to the verification team. Via checking these evidence, it is confirmed that 198 of all sampled 200 biogas digesters and stoves were under operation, hence the operation rate is calculated as 99%. The verification team has also visited 85 of the households on a random sampling basis and interviewed the users during on-site inspection. The two households from 200 sample whose biogas digester and stove was not under operation during the CME conducted the sampling survey was investigated by the verification team, via interview and checking the routine maintenance check records/64/ for this household with digester stop in year 2018 against the questionnaire paper that filled by this household during sampling survey/18/, it is confirmed that no pig raised by household and the adults family members were not at home every day, only old persons and kids stayed at home. For the aged and children, they did not have power and time to raise pigs. Hence, no pig was adopted is considered as reasonable. Furthermore, the verification team interviewed with this household during on-site inspection and got the same information with the questionnaire. Hence, it is confirmed that the value collected from monitoring survey is credible and actual. Via the information gathered by verification team, it is confirmed that the others sampled 83 biogas digesters and stoves were under operation, hence it is confirmed that the value in MR is reasonable. Based on the result of acceptance sampling, the monitoring records

			are deemed acceptable in accordance with the sampling standard.
	SDG 13: Climate Action $N_{m,y}$ - Number of thermal application *m* remaining in use in year *y*.	2898-0001: 1,000 2898-0073: 3,350 All other CPAs: 4,601 The total number for the 87 CPAs during this monitoring period is 395,435.	*m* refers to coal stove as there is only coal stove involved. Sampling monitoring survey with a sampling size determined following the latest guidelines and the applied methodologies. In order to determine the number of coal stove remaining in use in each CPA, CME have followed sampling approach and randomly selected 200 households for interview. The information obtained from household interviews has been recorded in the form of questionnaire papers. Well trained survey staffs were in charge of collecting and recording the information from the questionnaire papers. The information collected by the survey staffs has been supplied to Chengdu Oasis Science & Technology Co., Ltd. (the CME) and data was transferred to automatic database system to determine the value of this parameter. Survey list of the 200 samples[17] and the questionnaire papers filled by the households[18] were provided to the verification team. Via checking these evidence, it is confirmed that all sampled 200 households had coal stoves in use in year 2018, hence the value is confirmed as following: 2898-0001: 1,000 2898-0073: 3,350 All other CPAs: 4,601 The total number for the 87 CPAs during this monitoring period is 395,435. Monitoring has been done through a statistically valid sample of the households where the systems are installed as per the relevant requirements for sampling in the latest standard for sampling and surveys using a 95% confidence interval and a 10% margin of error. The verification team has also visited 85 of the households on a random sampling basis and

			interviewed the households during on-site inspection. Via the information gathered by verification team, it is confirmed that all sampled 85 households have coal stoves in use, hence it is confirmed that the value in MR is correct. Based on the result of acceptance sampling, the monitoring records are deemed acceptable in accordance with the sampling standard.
	SDG 13: Climate Action t- Mean annual operation hours of the digesters	8,423.52 hours	In order to determine the mean annual operation hours of the digesters, CME have followed sampling approach and randomly selected 200 households for interview. The data obtained from household interviews has been recorded in the form of questionnaire papers. Well trained survey staffs were in charge of collecting and recording the information from the questionnaire papers. The information collected by the survey staffs has been supplied to Chengdu Oasis Science & Technology Co., Ltd. (the CME) and data was transferred to automatic database system to determine the value of this parameter. Survey list of the 200 samples/17/ and the questionnaire papers filled by the households/18/ were provided to the verification team. Via checking these evidence, it is confirmed that mean annual operation hours of the digesters is calculated as following: 350.98 days*24 hours/day= 8,423.52 hours Monitoring has been done through a statistically valid sample of the households where the systems are installed as per the relevant requirements for sampling in the latest standard for sampling and surveys using a 95% confidence interval and a 10% margin of error. The verification team has also visited 85 of the households on a random sampling basis and interviewed the households during on-site inspection. Via the

			data gathered and calculated by verification team, it is confirmed that mean annual operation hours of the digesters is calculated as following: 349.59 days*24 hours/day= 8,390.16 hours For this result, it is confirmed that the values of 65 samples which derived from CME 200 samples are consistent with the CME data, and for the other 20 samples, operation hours of the digesters for all the samples are 365 days*24h. Due to the different size of the CME data and CTI data, the mean values are not same. Thus it is confirmed that the value in MR is reasonable. Based on the result of acceptance sampling, the monitoring records are deemed acceptable in accordance with the sampling standard.
	SDG 13: Climate Action T - Mean annual temperature in city *k*. This parameter determines the emission factors of the existing manure management systems.	Bazhong : 17.6 Chengdu : 16.6 Dazhou : 18.1 Deyang : 17.1 Guang'an : 17.6 Guangyuan : 16.2 Kangding : 8 Leshan : 18.6 Luzhou : 18.2 Meishan : 18.1 Mianyang : 17.6 Nanchong : 17.5 Neijiang : 18 Panzhihua : 20.7 Suining : 17.9 Xichang : 17.5 Yaan : 17.1 Yibin : 19.1 Zigong : 18.9 Ziyang : 18.1	According to the latest approved PoA-DD and CPA-DDs, Data should be derived from official sources (e.g. the Sichuan Statistical Yearbook) and latest available official publication should be used. When the monitoring report is published on the UNFCCC website, Sichuan Statistical Yearbook 2018[/42/] which provided the annual average temperature for the year 2017 is checked as the latest available source. Therefore, Mean annual temperature in the Sichuan Statistical Yearbook 2018 for the year 2017 is used. Through checking the Sichuan Statistical Yearbook 2018[/42/], it is confirmed that the value used in the MR is correct and in line with the evidence.
	SDG 13: Climate Action $MCF_{j,k}$ - Methane conversion factors for each manure management system j in climate region k.	Bazhong : 35 Chengdu : 32 Dazhou : 35 Deyang : 32 Guang'an : 35 Guangyuan : 29 Kangding : 17 Leshan : 39 Luzhou : 35 Aba : 17	The value is the methane conversion factor under different temperature. As the 395,435 households are distributed in 13 different cities, the methane conversion factor is different from each other due to different temperature. The value is available in the IPCC 2006 Guidelines for National Greenhouse Gas Inventories, Volume 4, Chapter 10, Table

		Meishan : 35 Mianyang : 35 Nanchong : 35 Neijiang : 35 Panzhihua : 46 Suining : 35 Xichang : 35 Yaan : 32 Yibin : 39 Zigong : 39 Ziyang : 35	10.17[/44/], in which, different temperature is corresponding different $MCF_{j,k}$ value. As the mean annual temperature is for year 2017 which is derived from Sichuan Statistical Yearbook 2018[/42/], thus the corresponding value derived from IPCC 2006 Guidelines for National Greenhouse Gas Inventories, Volume 4, Chapter 10, Table 10.17[/44/] is confirmed as correctly used in the MR.
	SDG 13: Climate Action $N_{LT,y}$ - Annual average number of animals of type LT in year y (numbers).	4.09	In order to determine the annual average number of animals, CME have followed sampling approach and randomly selected 200 households for interview. The number of animals was determined based on the number of pigs per households and the number of households in a given CPA. The data obtained from household interviews has been recorded in the form of questionnaire papers. Well trained survey staffs were in charge of collecting and recording the information from the questionnaire papers. The information collected by the survey staffs has been supplied to Chengdu Oasis Science & Technology Co., Ltd. (the CME) and data was transferred to automatic database system to determine the value of this parameter. Survey list of the 200 samples[/17/] and the questionnaire papers filled by the households[/18/] were provided to the verification team. Via checking these evidence, it is confirmed that annual average number of pigs is 4.09. Monitoring has been done through a statistically valid sample of the households where the systems are installed as per the relevant requirements for sampling in the latest standard for sampling and surveys using a 95% confidence interval and a 10% margin of error. And the relative error is calculated as 6.89% at the 95% confidence level. The monitoring of this parameter have met the confidence/precision of 95%/10%.

			The verification team has also visited 85 of the households on a random sampling basis and interviewed the households during on-site inspection. Via the data gathered and calculated by verification team, it is confirmed that annual average number of pigs is calculated as 4.34 which is higher than the MR value, thus it is confirmed that the value in MR is conservative. Based on the result of acceptance sampling, the monitoring records are deemed acceptable in accordance with the sampling standard.
	SDG 13: Climate Action $MS\%_{i,y}$ - Fraction of manure handled in project animal manure management system i (i.e. digestion in the newly installed biogas digester)	100%	In order to determine the fraction of manure handled in biogas digester, CME have followed sampling approach and randomly selected 200 households for interview. The information obtained from household interviews has been recorded in the form of questionnaire papers. Well trained survey staffs were in charge of collecting and recording the information from the questionnaire papers. The information collected by the survey staffs has been supplied to Chengdu Oasis Science & Technology Co., Ltd. (the CME) and data was transferred to automatic database system to determine the value of this parameter. Survey list of the 200 samples/17/ and the questionnaire papers filled by the households/18/ were provided to the verification team. Via checking these evidence, it is confirmed that all the manure generated has been fed into biogas digesters directly for all sampled 200 households, hence the value is confirmed as 100%. Monitoring has been done through a statistically valid sample of the households where the systems are installed as per the relevant requirements for sampling in the latest standard for sampling and surveys using a 95% confidence level and a 10% acceptable error. The verification team has also

			visited 85 of the households on a random sampling basis and interviewed the households during on-site inspection. Via the information gathered by verification team, it is confirmed that all the manure generated has been fed into biogas digesters directly for all sampled 85 households, hence it is confirmed that the value in MR is correct. Based on the result of acceptance sampling, the monitoring records are deemed acceptable in accordance with the sampling standard.
	Proper sludge application ratio - Land application of digestate from biogas digesters to avoid anaerobic digestion	100%	In order to determine the proper sludge application ratio, CME have followed sampling approach and randomly selected 200 households for interview. The information obtained from household interviews has been recorded in the form of questionnaire papers. Well trained survey staffs were in charge of collecting and recording the information from the questionnaire papers. The information collected by the survey staffs has been supplied to Chengdu Oasis Science & Technology Co., Ltd. (the CME) and data was transferred to automatic database system to determine the value of this parameter. Survey list of the 200 samples/17/ and the questionnaire papers filled by the households/18/ were provided to the verification team. Via checking these evidence, it is confirmed that all sampled 200 households apply the sludge according to the requirements, hence the value is confirmed as 100%. Monitoring has been done through a statistically valid sample of the households where the systems are installed as per the relevant requirements for sampling in the latest standard for sampling and surveys using a 95% confidence level and a 10% acceptable error. The verification team has also visited 85 of the households on a

			random sampling basis and interviewed the households during on-site inspection. Via the information gathered by verification team, it is confirmed that all sampled 85 households apply the sludge according to the requirements, hence it is confirmed that the value in MR is correct. Based on the result of acceptance sampling, the monitoring records are deemed acceptable in accordance with the sampling standard.
	SDG 13: Climate Action $EF_{CO2,i,y}$ - Emission Factor of raw coal	87.30 tCO_2/TJ	According to the latest approved PoA-DD and CPA-DDs, latest available official publication should be used. When the monitoring report is published on the UNFCCC website, latest data available is the official data from Chinese DNA. Therefore, Emission Factor of raw coal of Chinese DNA's Guideline of emission factors of Chinese grids 2017 is applied[/43/]. Via checking the Official data from Chinese DNA[/43/], it is confirmed that the value is correctly used in the MR.
	SDG 13: Climate Action $NCV_{i,y}$ - Net Calorific Value of raw coal	20.908 GJ/t	According to the latest approved PoA-DD and CPA-DDs, latest available official publication should be used. When the monitoring report is published on the UNFCCC website, latest data available is the official data from Chinese DNA. Therefore, Net Calorific Value of raw coal of Chinese DNA's Guideline of emission factors of Chinese grids 2017 is applied[/43/]. Via checking the Official data from Chinese DNA[/43/], it is confirmed that the value is correctly used in the MR.
	SDG 3 – Good Health and Well Being Smoke quantity in the kitchen while cooking	2.79 before and 0.27 after digester construction	As per the GS4GG transition Annex, This SDG 3 indicator is monitored randomly selected households (Random sampling) were interviewed by trained survey staff about the Smoke quantity in the kitchen while cooking. Following question related to this SD indicator has been answered by households: "Do you have a lot of smoke in the kitchen while cooking? (3= a lot of

				smoke very often; 2=lots of smoke sometimes; 1=just a little smoke; 0=no smoke)" before and after digester construction. As determined in the GS4GG transition Annex, this SD parameter should be monitored once a year, this monitoring period covered whole year of 2018, thus the monitoring was conducted in Apr - May 2019 by interviewing with sampled household. Via checking the 6th MR, the monitoring in 6th monitoring period was conducted in Apr 2018, thus it is confirmed that the monitoring was conducted once a year which is in line with the GS4GG transition Annex. Sampling size was determined as 200 households. The results of sampling survey were recorded and collected by survey staffs. Then, Sichuan Rural Energy Office (SREO) conducted completeness and consistency checks of the collected data and transferred them to automatic database system established by the CME. The monitoring result of this SD indicator is calculated automatically (in the database) as the average of the chosen index of each sampled household. During this monitoring period the indices are 2.79 and 0.27 before and after bio digester installation, respectively. The verification team has checked the Monitoring Survey list of the 200 samples/17/, the questionnaire papers filled by the households/18/, and Table of checked and accepted documents/19/. The sample size was considered as appropriate and conservative as verified in section 3.4 above. During the acceptance sampling survey the verification team interviewed 65 of these 200 households on a random sampling basis. The acceptance sampling of 65 households did not show any discrepancy. And combining with the the other 20 samples, the result is conservative compared with the MR value. Therefore, the verification team confirms the

			conclusion that the sampling survey records are reliable and the sampling result is acceptable. Moreover, CTI has checked the training records of the survey staff[/21/], the operation of the data base and management system and confirmed that data collection, transfer and processing functioned properly. Therefore, based on the document review and onsite verification, verification team is of the opinion that the smoke quantity in the kitchen while cooking has been decreased i.e. the target as defined in the GS4GG transition Annex for this SD indicator has been reached.
	SDG 3 – Good Health and Well Being Frequency of illness	1.23 before and 0.23 after digester construction	As per the GS4GG transition Annex, This SDG 3 indicator is monitored randomly selected households (Random sampling) were interviewed by trained survey staff about the Frequency of illness. Following question related to this SD indicator has been answered by households: "Do you suffer from this kind of disease, e.g. cough, headache, eyes infection, etc.? (3=very often;2=often; 1=sometimes; 0=never)" before and after digester construction. As determined in the GS4GG transition Annex, this SD parameter should be monitored once a year, this monitoring period covered whole year of 2018, thus the monitoring was conducted in Apr - May 2019 by interviewing with sampled household. Via checking the 6th MR, the monitoring in 6th monitoring period was conducted in Apr 2018, thus it is confirmed that the monitoring was conducted once a year which is in line with the GS4GG transition Annex. Sampling size was determined as 200 households. The results of sampling survey were recorded and collected by survey staffs. Then, Sichuan Rural Energy Office (SREO) conducted completeness and consistency checks of the collected data and transferred them to automatic database system established by

			the CME. The monitoring result of this SD indicator is calculated automatically (in the database) as the average of the chosen index of each sampled household. During this monitoring period the indices are 1.23 and 0.23 before and after bio digester installation, respectively. The verification team has checked the Monitoring Survey list of the 200 samples[/17/], the questionnaire papers filled by the households[/18/], and Table of checked and accepted documents[/19/]. The sample size was considered as appropriate and conservative as verified in section 3.4 above. During the acceptance sampling survey the verification team interviewed 65 of these 200 households on a random sampling basis. The acceptance sampling of 65 households did not show any discrepancy. And combining with the other 20 samples, the result is conservative compared with the MR value. Therefore, the verification team confirms the conclusion that the sampling survey records are reliable and the sampling result is acceptable. Moreover, CTI has checked the training records of the survey staff[/21/], the operation of the data base and management system and confirmed that data collection, transfer and processing functioned properly. Therefore, based on the document review and onsite verification, verification team is of the opinion that the frequency of illness has been decreased i.e. the target as defined in the GS4GG transition Annex for this SD indicator has been reached.
	SDG 6 – Clean Water and Sanitation Sanitation condition of toilet and pig pen in the households	The monitoring index difference of each sampled household does not exceed zero, it means for each sampled household, the sanitation conditions of toilet and pig pen mentioned in the questions above, have been improved	As per the GS4GG transition Annex, This SDG 6 indicator is monitored randomly selected households (Random sampling) were interviewed by trained survey staff about the sanitation conditions of toilet and pig pen. Following question related to this SD indicator has been answered by households: "Is there any manure going to river

		after the implementation of the project and the target of the parameter has been reached.	outside the barn? (0=yes, 1=no); Floor of toilet (1= cement; 2=stone or bricks; 3=soil piling; 4=wood laths); Any Roof of toilet? (0=yes, 1=no); is floor of animal barn made of cement? (0=yes, 1=no); Any fence wall of animal barn? (0=yes, 1=no); People can enter home without going through animal barns (0=yes, 1=no); etc." before and after digester construction. As determined in the GS4GG transition Annex, this SD parameter should be monitored once a year, this monitoring period covered whole year of 2018, thus the monitoring was conducted in Apr - May 2019 by interviewing with sampled household. Via checking the 6th MR, the monitoring in 6th monitoring period was conducted in Apr 2018, thus it is confirmed that the monitoring was conducted once a year which is in line with the GS4GG transition Annex. Sampling size was determined as 200 households. The results of sampling survey were recorded and collected by survey staffs. Then, Sichuan Rural Energy Office (SREO) conducted completeness and consistency checks of the collected data and transferred them to automatic database system established by the CME. The monitoring index difference of each sampled household for each question above, i.e. the index after the implementation of digester minus the index before the implementation of digester, has been performed. During this monitoring period, the monitoring index difference of each sampled household does not exceed zero. The verification team has checked the Monitoring Survey list of the 200 samples/17/, the questionnaire papers filled by the households/18/, and Table of checked and accepted documents/19/. The sample size was considered as appropriate and conservative as verified in section 3.4 above. During the acceptance sampling survey the verification team

			interviewed 65 of these 200 households on a random sampling basis. The acceptance sampling of 65 households did not show any discrepancy. And combining with the the other 20 samples, the result is consistent with the MR value. Therefore, the verification team confirms the conclusion that the sampling survey records are reliable and the sampling result is acceptable. Moreover, CTI has checked the training records of the survey staff[21], the operation of the data base and management system and confirmed that data collection, transfer and processing functioned properly. Therefore, based on the document review and onsite verification, verification team is of the opinion that the sanitation conditions of toilet and pig pen has been improved i.e. the target as defined in the GS4GG transition Annex for this SD indicator has been reached.
	SDG 5 – Gender Equality Cooking time saved, how the time saved is utilized	75.91 mins before and 55.82 mins after the projects	As per the GS4GG transition Annex, This SDG 5 indicator is monitored randomly selected households (Random sampling) were interviewed by trained survey staff about the daily cooking time and how they spend the saving time. Following question related to this SD indicator has been answered by households: “If the cooking time is decreased comparing with the situation before the project; how do you spend the time, such as education (1), doing business (2), other activity for earning money (3), taking care of kids(4), others.” As determined in the GS4GG transition Annex, this SD parameter should be monitored once a year, this monitoring period covered whole year of 2018, thus the monitoring was conducted in Apr - May 2019 by interviewing with sampled household. Via checking the 6th MR, the monitoring in 6th monitoring period was conducted in Apr 2018, thus it is confirmed that the monitoring was conducted once a year which

			is in line with the GS4GG transition Annex. Sampling size was determined as 200 households. The results of sampling survey were recorded and collected by survey staffs. Then, Sichuan Rural Energy Office (SREO) conducted completeness and consistency checks of the collected data and transferred them to automatic database system established by the CME. The monitoring result of this SD indicator is calculated automatically (in the database) as the average of the chosen index of each sampled household. During this monitoring period the indices are 75.91 mins before and 55.82 mins after the projects, respectively. And most of households chose to do other activity for earing money and taking care of kids. The verification team has checked the Monitoring Survey list of the 200 samples/17/, the questionnaire papers filled by the households/18/, and Table of checked and accepted documents/19/. The sample size was considered as appropriate and conservative as verified in section 3.4 above. During the acceptance sampling survey the verification team interviewed 65 of these 200 households on a random sampling basis. The acceptance sampling of 65 households did not show any discrepancy. And combining with the the other 20 samples, the result is conservative comparing with the MR value. Therefore, the verification team confirms the conclusion that the sampling survey records are reliable and the sampling result is acceptable. Moreover, CTI has checked the training records of the survey staff/21/, the operation of the data base and management system and confirmed that data collection, transfer and processing functioned properly. Therefore, based on the document review and onsite verification, verification team is of the opinion that the mean value cooking time

			has been decreased i.e. the target as defined in the GS4GG transition Annex for this SD indicator has been reached.
	SDG 7 – Affordable and Clean Energy Change in traditional fuel consumption (% of total energy requirements)	The monitoring result of this SD indicator is 2, which shows the consumption of coal/firewood/electricity is decreased compared with the situation without bio digester.	As per the GS4GG transition Annex, This SDG 7 indicator is monitored randomly selected households (Random sampling) were interviewed by trained survey staff about the change of consumption of traditional fuel. Following question related to this SD indicator has been answered by households: "How is the consumption of coal changed, compared with the situation without bio digester? (3= almost same; 2=decreased; 1=increased)"; "How is the consumption of firewood changed, compared with the situation without bio digester? (3= almost same; 2=decreased; 1=increased)"; "How is the consumption of electricity changed, compared with the situation without bio digester? (3= almost same; 2=decreased; 1=increased)"; As determined in the GS4GG transition Annex, this SD parameter should be monitored once a year, this monitoring period covered whole year of 2018, thus the monitoring was conducted in Apr - May 2019 by interviewing with sampled household. Via checking the 6th MR, the monitoring in 6th monitoring period was conducted in Apr 2018, thus it is confirmed that the monitoring was conducted once a year which is in line with the GS4GG transition Annex. Sampling size was determined as 200 households. The results of sampling survey were recorded and collected by survey staffs. Then, Sichuan Rural Energy Office (SREO) conducted completeness and consistency checks of the collected data and transferred them to automatic database system established by the CME. The monitoring result of this SD indicator is calculated automatically (in the database) as the average of the chosen index of

			each sampled household. During this monitoring period the monitoring result of this SD indicator is 2, which shows the consumption of coal/firewood /electricity is decreased compared with the situation without bio digester. The verification team has checked the Monitoring Survey list of the 200 samples[/17/], the questionnaire papers filled by the households[/18/], and Table of checked and accepted documents[/19/]. The sample size was considered as appropriate and conservative as verified in section 3.4 above. During the acceptance sampling survey the verification team interviewed 65 of these 200 households on a random sampling basis. The acceptance sampling of 65 households did not show any discrepancy. And combining with the other 20 samples, the result is consistent with the MR value. Therefore, the verification team confirms the conclusion that the sampling survey records are reliable and the sampling result is acceptable. Moreover, CTI has checked the training records of the survey staff[/21/], the operation of the data base and management system and confirmed that data collection, transfer and processing functioned properly. Therefore, based on the document review and onsite verification, verification team is of the opinion that the consumption of coal/firewood/electricity is decreased i.e. the target as defined in the GS4GG transition Annex for this SD indicator has been reached.
	SDG 5 – Gender Equality Number of Households trained on biogas utilization	All the sampled households have received training on biogas utilization	As per the GS4GG transition Annex, This SDG 5 indicator is monitored randomly selected households (Random sampling) were interviewed by trained survey staff about the training on the use of biogas. Following question related to this SD indicator has been answered by households: “Have you got the training on the use of biogas and basic knowhow

			of maintenance of digesters and biogas stove? (1=Yes, 2=No)". As determined in the GS4GG transition Annex, this SD parameter should be monitored once a year, this monitoring period covered whole year of 2018, thus the monitoring was conducted in Apr - May 2019 by interviewing with sampled household. Via checking the 6th MR, the monitoring in 6th monitoring period was conducted in Apr 2018, thus it is confirmed that the monitoring was conducted once a year which is in line with the GS4GG transition Annex. Sampling size was determined as 200 households. The results of sampling survey were recorded and collected by survey staffs. Then, Sichuan Rural Energy Office (SREO) conducted completeness and consistency checks of the collected data and transferred them to automatic database system established by the CME. The monitoring result of this SD indicator is calculated automatically (in the database) as the average of the chosen index of each sampled household. During this monitoring period the monitoring result of this SD indicator is 1, which shows all the sampled households have received such training. The verification team has checked the Monitoring Survey list of the 200 samples/17/, the questionnaire papers filled by the households/18/, and Table of checked and accepted documents/19/. The sample size was considered as appropriate and conservative as verified in section 3.4 above. During the acceptance sampling survey the verification team interviewed 65 of these 200 households on a random sampling basis. The acceptance sampling of 65 households did not show any discrepancy. And combining with the other 20 samples, the result is consistent with the MR value. Therefore, the verification team confirms the conclusion that the sampling survey records are

			reliable and the sampling result is acceptable. Moreover, CTI has checked the training records of the survey staff[/21/], the operation of the data base and management system and confirmed that data collection, transfer and processing functioned properly. Therefore, based on the document review and onsite verification, verification team is of the opinion that all the sampled households have received such training. i.e. the target as defined in the GS4GG transition Annex for this SD indicator has been reached.
	SDG 8 – Decent work and Economic Growth Income generation by technicians for the construction and maintenance of bio digesters	All the sample technicians involved in 87 CPAs have received the payment for their work.	During the period of digesters construction in the 87 CPAs, local technicians had been employed. They were paid for the workload by the local Rural Energy Office (REO) after the acceptance check of digesters. The payrolls as well as the payment evidence[/70/] were provided by local Rural Energy Office (REO). Moreover, during the monitoring survey, SREO provided the CME a list of technicians who participated in the digesters construction[/71/]. Based on the list, twenty technicians were randomly selected and interviewed by the CME by Phone and confirmed that they have got income from the construction of digesters[/72/], reaching the target as defined in the GS4GG transition Annex. The verification team has checked the payment evidence[/70/], provided by local REOs and is able to confirm that the technicians employed during the digesters construction have been paid by local REOs. Moreover, during the onsite visiting 25 technicians were interviewed and they also confirmed that payments have been received on time. Therefore, based on the document review and onsite verification, CTI is of the opinion that quantitative employment and income generation took place in the expected way, i.e. the target as defined in the GS4GG transition Annex for this SD indicator has been reached.

	SDG 13 – Climate Action Emission reductions achieved by the project	822,520 tCO_2e	Via checking the ER sheet comparing with the MR, it is verified that the ER achieved by the PoA is correct and actual, i.e. the target as defined in the GS4GG transition Annex for this SD indicator has been reached.
Findings	**CAR 02, CAR 03** (Refer to Appendix 4)		
Conclusion	All the findings above is closed. Refer to Appendix 4 for findings' resolution. Therefore, based on the document review and onsite verification, According to VVS for PoA version 02.0 para 345 to 349 and Gold Standard for the Global Goals Principles and Requirements[/66/] and based on the verification team's local and sectorial knowledge, it is confirmed that • the monitoring activities comply with the monitoring plan of the registered PoA-DD and the CPA-DDs; • all parameters that are baseline, project and leakage emission parameters are monitored as described in the registered monitoring plan; • the frequency of monitoring and recording are in line with the registered monitoring plan contained in the latest approved PoA-DD and each CPA-DDs; • the data generation of the parameters above is reliable and the procedures applied by the CME are appropriate. The data management of parameters above (data aggregation, data recording and data values) is considered to be appropriate. The QA/QC of the parameters was established according to the registered CPA-DDs and applied methodologies (including tools). • the GS-PoA conducted the SDG monitoring activities according the SDG targe requirements. • Through on-site interview and relevant documents checking, it is confirmed that SDG monitoring plan has been implemented in line with the monitoring plan description in GS4GG Transition Annex for the project activity. • The verification team is of the opinion that the project activity contributed positively to the SDG during the 7th monitoring period.		

E.3.4.3. Implementation of sampling plan

Means of verification	According to the latest version of VVS when the sample conducted, sample standard/guideline and applied methodologies included the applied tools, a single sample was drawn for all 87 included CPAs for this monitoring period in the PoA level by the CME from the monitoring database in line with the Guidelines for Sampling and Surveys for CDM Project Activities and Programme of Activities (hereafter can be referred to as the "sampling guideline"). According to the applied methodologies, confidence/precision of 90/10 is acceptable for sampling. According to the Standard for Sampling and Surveys for CDM Project Activities and Programme of Activities, confidence/precision of 95/10 should be applied when the sampling plan covered a group of CPAs. For this PoA, confidence/precision is determined as 95/10. Therefore, it is able to confirm that the selection of confidence/precision is appropriate by verification team. In this monitoring period (01/01/2018-31/12/2018), there are 87 CPAs including 395,435 households in this PoA[/26-28/.] All the households are located in Sichuan province, which is a limited area. Simple random sampling approach was selected for this PoA due to relatively homogenous population being studied, given the similar average ambient temperature and similar living habit of residents in Sichuan. Therefore, simple random sampling (SRS) approach was followed by the PP to determine the sample size, and it is able to confirm the selection of sampling approach is appropriate as per verification team's local knowledge. Target population is defined as all the households included in the PoA, i.e. 395,435 households in all included CPAs.

	According to the methodologies applied and latest approved PoA-DD and CPA-DDs, sampling approach is applied for the monitoring parameters: • $FC_{m,j}$ - Annual consumption of fossil fuel type *j* coal (physical units, mass/volume) by application *m*; • $n_{k,y}$ - Proportion of $N_{k,0}$ that remain operating at year *y* (fraction); • $N_{m,y}$ - Number of thermal application *m* remaining in use in year *y*; • *t* - Mean annual operation hours of the digesters; • $N_{LT,y}$ - Annual average number of animals of type *LT* in year *y* (numbers); • $MS\%_{i,y}$ - Fraction of manure handled in project animal manure management system *i* (i.e. digestion in the newly installed biogas digester); • Proper sludge application ratio - Land application of digestate from biogas digesters to avoid anaerobic digestion; The sample size of the PoA considering the parameters is calculated in a conservative way, and the least number of the sample size is 139 for two different methodology combinations. The CME chose 200 for conservation as the same. Refer to section D.4 of this report for detail assessment of the implementation of sampling plan.
Findings	**CAR 04** (Refer to Appendix 4)
Conclusion	CAR 04 is closed. Refer to Appendix 4 for findings' resolution. According to latest version of Guidelines: Sampling and surveys for CDM project activities and programmes of activities[/40/] and Standard: Standard for sampling and surveys for CDM project activities and Programme of Activities[/41/], and based on the verification team's local and sectorial knowledge, the verification team confirms that the sampling approach applied by the CME is in accordance with the latest approved PoA-DD and the CPA-DDs. The sample plan is reasonable to conduct and the implementation is well performed and results of the sample survey can be accepted. The implementation of sample plan is in line with the VVS for PoA (version 02.0), sample standard/guideline[/40,41/] and applied methodologies[/32,33/] included the applied tools.

E.3.4.4. Compliance with the calibration frequency requirements for measuring instruments

Means of verification	According to para 351 to 357, VVS for PoA (version 02.0), VVB shall determine whether the calibration of the measuring equipment that has an impact on the claimed GHG emission reductions or net anthropogenic GHG removals is conducted by the coordinating/managing entity at a frequency specified in the applied methodologies, the applied standardized baselines and/or the registered monitoring plan. As there is no measuring equipment stated in the latest approved PoA-DD and included CPA-DDs, all the parameters values are applied default values or public data or calculated based on sample survey results, thus this compliance requirement is not applicable of the PoA.
Findings	N/A
Conclusion	N/A

E.3.4.5. Stakeholder inputs and legal disputes

Means of verification	**Implementation of continuous input /grievance mechanism and the inputs/grievances which have been received for the project during the monitoring period** The CME proposed following four methods of continuous input & grievance expression: 1) Comment book. It's available at the reception room of each involved local rural energy office. All stakeholders have access to provide feedback on comment books. The contact information of Sichuan Rural energy office is listed on the first

	page of the comment book for each local office[/73/]. 2) Telephone access. Stakeholders can also provide comments via phone. The telephone number of Sichuan Rural energy office (Contact info: Song Yumin, Sichuan rural energy office, 028-85534729) is provided to contact. 3) Internet/email access. Email address of Sichuan Rural energy office is provided as well for stakeholders to provide comments in the internet. Contact info: Song Yumin, Sichuan rural energy office, scnnjnjp@163.com. 4) Access to Gold Standard. Emails (info@goldstandard.org) as well as the GS telephone number +41 (0) 22 788 7080 has been published as well for stakeholder's comments. In the course of this verification CTI found the four channels to collect continuous input & grievance expression were well established. Through checking the comments book[/73/], interview with the personnel in charge of telephone and E-mail access (Mr. Song Yumin of Sichuan Rural energy office) CTI is able to confirm that during this monitoring period, no comments were received via comment book, contact person, telephone and email access.
Findings	**CAR 05** (Refer to Appendix 4)
Conclusion	CAR 05 is closed. Refer to Appendix 4 for findings' resolution. The verification team is of the opinion that the continuous input /grievance mechanism was implemented during this monitoring period and no inputs/grievances which have been received for the project during the monitoring period.

E.3.5. Calculation of SDG outcomes

E.3.5.1. Calculation of baseline value or estimation of baseline situation of each SDG outcome

Means of verification	According to VVS for PoA (version 02.0), a complete set of data for the specified monitoring period is verified. Information provided in the monitoring report has been crosschecked with other sources such as sampling survey results and commission records. Calculations of baseline GHG emissions have been verified whether carried out in accordance with the formulae and methods described in the latest approved monitoring plan and the applied methodology. Any assumptions used in emission or removal calculations have been justified. Whether the appropriate emission factor, IPCC default values, GWP and other reference values have been correctly applied. The correctness of information provided in the monitoring report has been verified by cross checks with Survey list of the 200 samples[/17/], Questionnaire paper[/18/] that filled by the investigated households, Table of checked and accepted documents for all constructed biogas digesters signed by local authority[/19/], Sichuan Statistical Yearbook 2018[/42/], IPCC default value[/44/], and Chinese DNA's Guideline of emission factors of Chinese grids 2017[/43/]. There are two parts of the baseline emissions, baseline emissions from an existing animal manure management system and baseline emissions due to the reduction of coal consumption. i. The baseline emissions from an existing animal manure management system $BE_{CH4,y}$ can be calculated as formula below： $$BE_{CH_4,y} = GWP_{CH_4} \cdot D_{CH_4} \cdot UF_b \cdot \sum_{j,LT} MCF_j \cdot B_{0,LT} \cdot N_{LT,y} \cdot VS_{LT,y} \cdot MS\%_{Bl,j} \quad 1$$ Where:

$BE_{CH_4,y}$	Baseline methane emissions in year y (tCO_2e)
GWP_{CH_4}	Global Warming Potential for CH_4 (25 from 01/01/2013 onwards)
D_{CH_4}	CH_4 density (0.00067 t/m^3 at room temperature (20 °C) and 1 atm pressure)
UF_b	Model correction factor to account for model uncertainties (0.94)
j	Index for animal manure management system. As – according to the applicability criteria - all households use pits to store the animal manure, this index is used for the different climate conditions on a city basis. As most of the CPAs only cover households in one city (refer section A.2), this index will only cover one city.
LT	Index for all types of livestock
MCF_j	Annual methane conversion factor (MCF) for the baseline animal manure management system j. To pay respect to different annual mean temperatures in the covered region, the pits in different cities are considered different manure management systems with different MCF values.
$B_{0,LT}$	Maximum methane producing capacity for the volatile solid generated for animal type LT (m^3 $CH_4(kgdm)^{-1}$)
$N_{LT,y}$	Annual average number of animals of type LT in year y (numbers). The number of animals will be determined based on city averages of the number of pigs per households and the number of households in each city (=climatic region).
$VS_{LT,y}$	Volatile solids for livestock LT entering the animal manure management system in year y (on a dry matter weight basis, kg dm/animal/year)
$MS\%_{Bl,j}$	Fraction of manure handled in baseline animal manure management system j. As the index j is covered the different climate conditions of the cities, this fraction reflects the share of animals in a climatic region to the total number of animals.

For all the parameters used for calculation, GWP_{CH4}, D_{CH4}, UF_b, $B_{0,LT}$, $VS_{LT,y}$, $MS\%_{Bl,j}$ are ex-ante determined value in line with the latest approved PoA-DD and CPA-DDs and applied methodology. While, MCF_j, $N_{LT,y}$ are monitored parameters and have been assessed in above section.

For the specific calculation of baseline emissions of each CPA within this monitoring period, the result of equation above is multiplied with three factors to be reasonable and conservative:

Time: To account for the length of the monitoring period, the length of the monitoring period in days divided by 365 is applied as a factor. For CPA 2898-0001 to 2898-0087, the factor is 365/365 = 1.

Households with proper sludge application: To exclude households without proper sludge application, the baseline emissions are multiplied with the monitoring parameter "Proper Sludge Application". During this monitoring period, 100% of sampled households have proper sludge application.

Number of households: Multiplying the baseline emissions per household with the number of households in the CPA leads to the baseline emissions in the entire CPA. During this monitoring period, 198 of 200 sampled households have biogas digesters operation, share of households in operation is 99% for each CPA. Therefore, during this monitoring period, the number of households used for calculation for each CPA is: 2898-0001: 990; 2898-0073: 3,316, remaining CPAs: 4,555 per CPA.

ii. The baseline emissions due to coal replacement $BE_{CO2,y}$ can be calculated as formula below：

	$$BE_{CO_2,y} = \sum_k \sum_j N_{k,0} * n_{k,y} * FC_{BL,k,j} * NCV_j * EF_{FF,j}$$ 2 Where: $BE_{CO_2,y}$ — Baseline carbon dioxide emissions from fossil fuel combustion in year *y* (tCO_2e) *K* — Index for the type of thermal applications introduced by the project activity (e.g. cook stove, water heater). Only one type of thermal application, i.e. cook stove is considered. *J* — Index for the type of baseline fossil fuel consumed. Here *J* is 1 as only coal is considered. This is conservative. $N_{k,0}$ — Number of thermal applications *k* commissioned; $n_{k,y}$ — Proportion of $N_{k,0}$ that remain operating in year *y* (fraction) $FC_{BL,k,j}$ — Annual consumption of baseline fossil fuel *j* (mass or volume unit). For this project, only baseline emissions from coal consumption are considered in the calculation of emission reductions. This is a conservative approach. NCV_j — Net calorific value of the fossil fuel *j* (GJ/mass or volume unit). According to national data published by NDRC, the NCV of raw coal is 20.908 GJ/t. $EF_{FF,j}$ — Is the CO_2 emission coefficient of fuel *j* in year y (tCO_2/GJ). National data published by NDRC of coal (87.3 tCO_2/TJ) is applied. For all the parameters used for calculation, $N_{k,0}$, $n_{k,y}$, $FC_{BL,k,j}$, NCV_j and $EF_{FF,j}$ are monitored parameters and have been assessed in above section.
Findings	N/A
Conclusion	According to Para. 358 to 360 of VVS for PoA Version 02.0, the verification team checked and recalculated the ER calculation sheet and confirms that: 1. A complete set of data for the specified monitoring period was available and is duly reported. 2. As indicated above, the description with regard to cross-check of reported data is included under respective parameter. 3. Appropriate methods and formulae for calculating baseline GHG emissions or baseline net GHG removals were followed. 4. Appropriate emission factor, IPCC default values, GWP value and other reference values have been correctly applied. 5. The sheet is reproducible and calculation was correctly applied. The confirmed value of baseline emissions is 935,883 tCO_2e.

E.3.5.2. Calculation of project value or estimation of project situation of each SDG outcome

Means of verification	According to VVS for PoA (version 02.0), a complete set of data for the specified monitoring period is verified. Information provided in the monitoring report has been crosschecked with other sources such as sampling survey results and commission records. Calculations of project GHG emissions have been verified whether carried out in accordance with the formulae and methods described in the latest approved monitoring plan and the applied methodology. Any assumptions used in emission or removal calculations have been justified. Whether the appropriate emission factor, IPCC default values, GWP and other reference values have been correctly applied. The correctness of information provided in the monitoring report has been verified by cross checks with Survey list of the 200 samples/17/, Questionnaire paper/18/ that filled by the investigated households, Table of checked and accepted documents for all constructed biogas digesters signed by local authority/19/, Sichuan Statistical Yearbook 2018/42/, IPCC default value/44/, and Chinese DNA's Guideline of emission factors of Chinese grids 2017/43/. There are two parts of the project emissions, project emissions from physical

leakage and project emissions due to the coal consumption.

i. The project emissions from physical leakage $PE_{CH4,y}$ can be calculated as formula below：

$$PE_{CH_4,y} = 0.10 \cdot GWP_{CH_4} \cdot D_{CH_4} \cdot \sum_{i,LT} B_{0,LT} \cdot N_{LT,y} \cdot VS_{LT,y} \cdot MS\%_{i,y} \quad (3)$$

Where:

$PE_{CH_4,y}$	Project methane emissions in year y (tCO_2e)
GWP_{CH_4}	Global Warming Potential for CH_4 (25 from 01/01/2013 onwards)
D_{CH_4}	CH_4 density (0.00067 t/m^3 at room temperature (20deg C) and 1 atm pressure)
i	Index for animal manure management system. As – according to the applicability criteria - all households use pits to store the animal manure, this index is used for the different climate conditions on a city basis.
LT	Index for all types of livestock
$B_{0,LT}$	Maximum methane producing capacity for the volatile solid generated for animal type *LT* (m^3 CH_4 $(kg\ dm)^{-1}$)
$N_{LT,y}$	Annual average number of animals of type LT in year y (numbers). The number of animals will be determined based on city averages of the number of pigs per households and the number of households in a given city.
$VS_{LT,y}$	Volatile solids for livestock LT entering the animal manure management system in year y (on a dry matter weight basis, kg dm/animal/year)
$MS\%_{i,j}$	Fraction of manure handled in system i in year y. As the index i covers the different climate conditions of the cities, this fraction reflects the share of household in a given city.

For all the parameters used for calculation, GWP_{CH4}, D_{CH4}, $B_{0,LT}$, $VS_{LT,y}$ are ex-ante determined value in line with the latest approved PoA-DD and CPA-DDs and applied methodology. While $N_{LT,y}$, $MS\%_{i,y}$ are monitored parameters and have been assessed in above section.

For the specific calculation of project emissions of each CPA within this monitoring period, the result of equation above is multiplied with two factors:

Time: To account for the length of the monitoring period, the length of the monitoring period in days divided by 365 is applied as a factor. For CPA 2898-0001 to 2898-0087, the factor is 365/365 = 1.

Households with proper sludge application: To exclude households without proper sludge application, the project emissions are multiplied with the monitoring parameter “Proper Sludge Application”. During this monitoring period, 100% of sampled households have proper sludge application.

ii. The project emissions from coal consumption $PE_{CO2,y}$ can be calculated as formula below：

$$PE_{CO_2,y} = \sum_m \sum_j N_{m,y} * FC_{m,j} * NCV_j * EF_{FF,j} \quad (4)$$

Where:

$PE_{CO_2,y}$	Project carbon dioxide emissions from fossil fuel combustion in year y (tCO_2e)
m	Index for thermal application (e.g. cook stove, water heater) not decommissioned by the project activity. In this POA, only cook stove is involved, here m is 1.
$N_{m,y}$	Number of thermal application m remaining in use in year y

	$FC_{m,j}$	Annual consumption of fossil fuel type j (physical units, mass/volume) by application m (use 90/10 precision for sampling and sampling requirements specified for baseline sampling described in paragraph 10(a) above may be applied). Option (ii) under paragraph 10(a) is chosen, the value obtained is multiplied by 1.12 to account for uncertainties. Here, coal as fossil fuel is accounted for.
	NCV_j	Net calorific value of the fossil fuel j (GJ/mass or volume unit). According to national data published by NDRC, the NCV of raw coal is 20.908 GJ/t.
	$EF_{FF,j}$	Is the CO_2 emission coefficient of fuel *j* in year *y* (tCO_2/GJ). National data published by NDRC of coal (87.3 tCO_2/TJ) is applied.
	For all the parameters used for calculation, $N_{m,y}$, $FC_{m,j}$, NCV_j and $EF_{FF,j}$ are monitored parameters and have been assessed in above section.	
Findings	N/A	
Conclusion	According to Para. 358 to 360 of VVS for PoA version 02.0, the verification team checked and recalculated the ER calculation sheet and confirms that: 1. A complete set of data for the specified monitoring period was available and is duly reported. 2. As indicated above, the description with regard to cross-check of reported data is included under respective parameter. 3. Appropriate methods and formulae for calculating project GHG emissions or project net GHG removals were followed. 4. Appropriate emission factor, IPCC default values, GWP value and other reference values have been correctly applied. 5. The sheet is reproducible and calculation was correctly applied. The confirmed value of project emissions is 113,363 tCO_2e.	

E.3.5.3. Calculation of leakage GHG emissions

Means of verification	Calculations of leakage GHG emissions have been verified whether carried out in accordance with the formulae and methods described in the latest approved monitoring plan and the applied methodologies. As per the PoA-DD, the leakage is determined by paragraph 11 of AMS-III.R and paragraph 15 of AMS-I.I: *11. If the methane recovery and combustion equipment is transferred from another activity or if the existing equipment is transferred to another activity, leakage is to be considered.* *15. If the energy generating equipment introduced by the project activity is transferred from outside the boundary to the project activity, leakage is to be considered.* Via on-site inspection and checking all the related documents such as Biogas stove test report[/30/] and Table of checked and accepted documents for all constructed biogas digesters[/19/], it is confirmed that both paragraphs are not applicable to the proposed project as no equipment was transferred from or to another activity and no collection/processing/transportation takes place outside the project boundary during this monitoring period.
Findings	N/A
Conclusion	According to the approved revised PoA-DD and the CPA-DDs, it is confirmed that the leakage emissions of this PoA and its CPAs are 0.

E.3.5.4. Calculation of net benefits as difference of baseline and project values or direct calculation for each SDG outcome

Means of verification	According to VVS for PoA (version 02.0), a complete set of data for the specified monitoring period is verified. Information provided in the monitoring report has been crosschecked with other sources such as sampling survey results and commission records. Calculations of GHG emission reductions have been verified whether carried out in accordance with the formulae and methods described in the latest

	approved monitoring plan and the applied methodology. Any assumptions used in emission or removal calculations have been justified. Whether the appropriate emission factor, IPCC default values, GWP and other reference values have been correctly applied. The correctness of information provided in the monitoring report has been verified by cross checks with Survey list of the 200 samples[17], Questionnaire paper[18] that filled by the investigated households, Table of checked and accepted documents for all constructed biogas digesters signed by local authority[19], Sichuan Statistical Yearbook 2018[42], IPCC default value[44], and Chinese DNA's Guideline of emission factors of Chinese grids 2017[43]. There are two parts of the emission reductions, emission reductions from an existing animal manure management system and emission reductions due to the coal replacement. The equations used to calculate the emission reductions are listed as follow: $ER_{CH4,y} = BE_{CH4,y} – PE_{CH4,y} – LE$ $ER_{CO2,y} = BE_{CO2,y} – PE_{CO2,y} – LE$ $ER_y = ER_{CH4,y} + ER_{CO2,y}$
Findings	N/A
Conclusion	According to Para. 358 to 360 of VVS for PoA version 02.0, the verification team checked and recalculated the ER calculation sheet and confirms that: 1. A complete set of data for the specified monitoring period was available and is duly reported. 2. As indicated above, the description with regard to cross-check of reported data is included under respective parameter. 3. Appropriate methods and formulae for calculating GHG emission reductions or net GHG removals were followed. 4. Appropriate emission factor, IPCC default values, GWP value and other reference values have been correctly applied. 5. The sheet is reproducible and calculation was correctly applied. The confirmed value of emission reductions is 822,520 tCO_2e.

Title and UNFCCC reference number of the CPA	Baseline emissions or baseline net GHG removals by sinks (tCO_2e)	Project emissions or actual net GHG removals by sinks (tCO_2e)	Leakage (tCO_2e)	GHG emission reductions or net GHG removals by sinks (tCO_2e)		
				Amount achieved before 1 January 2013	Amount achieved from 1 January 2013	Amount achieved in the entire monitoring period
2898-0001	**2,443**	**287**	**0**	**0**	**2,156**	**2,156**
2898-0002	**11,238**	**1,319**	**0**	**0**	**9,919**	**9,919**
2898-0003	**11,238**	**1,319**	**0**	**0**	**9,919**	**9,919**
2898-0004	**11,238**	**1,319**	**0**	**0**	**9,919**	**9,919**
2898-0005	**11,238**	**1,319**	**0**	**0**	**9,919**	**9,919**
2898-0006	**11,238**	**1,319**	**0**	**0**	**9,919**	**9,919**
2898-0007	**11,238**	**1,319**	**0**	**0**	**9,919**	**9,919**
2898-0008	**11,238**	**1,319**	**0**	**0**	**9,919**	**9,919**
2898-0009	**11,238**	**1,319**	**0**	**0**	**9,919**	**9,919**
2898-0010	**11,238**	**1,319**	**0**	**0**	**9,919**	**9,919**
2898-0011	**10,834**	**1,319**	**0**	**0**	**9,515**	**9,515**

2898-0012	10,834	1,319	0	0	9,515	9,515
2898-0013	10,834	1,319	0	0	9,515	9,515
2898-0014	10,834	1,319	0	0	9,515	9,515
2898-0015	10,834	1,319	0	0	9,515	9,515
2898-0016	10,834	1,319	0	0	9,515	9,515
2898-0017	10,834	1,319	0	0	9,515	9,515
2898-0018	10,834	1,319	0	0	9,515	9,515
2898-0019	10,834	1,319	0	0	9,515	9,515
2898-0020	10,834	1,319	0	0	9,515	9,515
2898-0021	10,834	1,319	0	0	9,515	9,515
2898-0022	10,834	1,319	0	0	9,515	9,515
2898-0023	10,834	1,319	0	0	9,515	9,515
2898-0024	10,834	1,319	0	0	9,515	9,515
2898-0025	10,834	1,319	0	0	9,515	9,515
2898-0026	10,834	1,319	0	0	9,515	9,515
2898-0027	10,834	1,319	0	0	9,515	9,515
2898-0028	10,834	1,319	0	0	9,515	9,515
2898-0029	10,834	1,319	0	0	9,515	9,515
2898-0030	10,834	1,319	0	0	9,515	9,515
2898-0031	10,834	1,319	0	0	9,515	9,515
2898-0032	10,834	1,319	0	0	9,515	9,515
2898-0033	10,834	1,319	0	0	9,515	9,515
2898-0034	10,834	1,319	0	0	9,515	9,515
2898-0035	10,834	1,319	0	0	9,515	9,515
2898-0036	10,834	1,319	0	0	9,515	9,515
2898-0037	10,834	1,319	0	0	9,515	9,515
2898-0038	10,834	1,319	0	0	9,515	9,515
2898-0039	10,834	1,319	0	0	9,515	9,515
2898-0040	10,834	1,319	0	0	9,515	9,515
2898-0041	10,834	1,319	0	0	9,515	9,515
2898-0042	10,834	1,319	0	0	9,515	9,515
2898-0043	10,834	1,319	0	0	9,515	9,515
2898-0044	10,834	1,319	0	0	9,515	9,515
2898-0045	10,834	1,319	0	0	9,515	9,515
2898-0046	10,834	1,319	0	0	9,515	9,515
2898-0047	11,238	1,319	0	0	9,919	9,919
2898-0048	11,238	1,319	0	0	9,919	9,919
2898-0049	11,238	1,319	0	0	9,919	9,919

2898-0050	10,834	1,319	0	0	9,515	9,515
2898-0051	10,834	1,319	0	0	9,515	9,515
2898-0052	9,546	1,319	0	0	8,227	8,227
2898-0053	10,913	1,319	0	0	9,594	9,594
2898-0054	10,834	1,319	0	0	9,515	9,515
2898-0055	10,834	1,319	0	0	9,515	9,515
2898-0056	10,834	1,319	0	0	9,515	9,515
2898-0057	10,834	1,319	0	0	9,515	9,515
2898-0058	10,834	1,319	0	0	9,515	9,515
2898-0059	10,834	1,319	0	0	9,515	9,515
2898-0060	10,834	1,319	0	0	9,515	9,515
2898-0061	10,834	1,319	0	0	9,515	9,515
2898-0062	10,834	1,319	0	0	9,515	9,515
2898-0063	10,834	1,319	0	0	9,515	9,515
2898-0064	10,834	1,319	0	0	9,515	9,515
2898-0065	11,238	1,319	0	0	9,919	9,919
2898-0066	11,238	1,319	0	0	9,919	9,919
2898-0067	10,834	1,319	0	0	9,515	9,515
2898-0068	10,709	1,319	0	0	9,390	9,390
2898-0069	10,834	1,319	0	0	9,515	9,515
2898-0070	10,834	1,319	0	0	9,515	9,515
2898-0071	10,849	1,319	0	0	9,530	9,530
2898-0072	11,020	1,319	0	0	9,701	9,701
2898-0073	8,019	961	0	0	7,058	7,058
2898-0074	11,238	1,319	0	0	9,919	9,919
2898-0075	10,834	1,319	0	0	9,515	9,515
2898-0076	10,834	1,319	0	0	9,515	9,515
2898-0077	10,834	1,319	0	0	9,515	9,515
2898-0078	10,834	1,319	0	0	9,515	9,515
2898-0079	10,834	1,319	0	0	9,515	9,515
2898-0080	10,834	1,319	0	0	9,515	9,515
2898-0081	10,834	1,319	0	0	9,515	9,515
2898-0082	9,746	1,319	0	0	8,427	8,427
2898-0083	10,858	1,319	0	0	9,539	9,539
2898-0084	11,166	1,319	0	0	9,847	9,847
2898-0085	10,834	1,319	0	0	9,515	9,515
2898-0086	10,918	1,319	0	0	9,599	9,599
2898-0087	11,086	1,319	0	0	9,767	9,767

Total	**935,883**	**113,363**	**0**	**0**	**822,520**	**822,520**

E.3.5.5. Summary of ex-post values of each SDG outcome for the current monitoring period

Means of verification

Compared the monitoring report with the latest approved CPA-DDs and PoA-DD, and found the actual values of each SDG outcome for the current monitoring period is fulfilled each SDG target.

Item	Parameter	Baseline	Project outcome	Net benefit Verified
SDG3: Good Health and Well-Being	Smoke quantity in the kitchen while cooking	Index is 2.79	Index is 0.27	Decreased.
SDG3: Good Health and Well-Being	Frequency of illness	Index is 1.23	Index is 0.23	Decreased
SDG6: Clean Water and Sanitation	Sanitation condition of toilet and pig pen in the households	Low	High	Improved.
SDG5: Gender Equality	Daily cooking time	75.91 mins	55.82 mins, Saving time to make money and take care of kids.	Decreased.
SDG7: Affordable and Clean Energy	Change in traditional fuel consumption (% of total energy requirements)	High	Low	Decreased.
SDG5: Gender Equality	Number of Households trained to use biogas and know the basic maintenance of digesters and biogas stoves	None	All of project Households are trained	Number increased.
SDG8: Decent work and economic growth	Quantitative employment and income generation	Quantitative employment and income generation is low	Quantitative employment and income generation is high	Quantitative employment and income generation is increased
SDG13: Climate Action	Emission reductions achieved by the PoA	935,883 tCO_2e	113,363 tCO_2e	822,520 tCO_2e

Findings

CAR 06

	(Refer to Appendix 4)
Conclusion	CAR 06 is closed. Refer to Appendix 4 for findings' resolution. The MR includes a comparison of the ex-ante values with ex-post values of each SDG outcome for the current monitoring period. It is confirmed that the net benefits are achieved.

E.3.5.6. Comparison of actual value of outcomes with estimates in approved PDD

Means of verification

Compared the monitoring report with the latest approved CPA-DDs and PoA-DD, and found the actual value achieved during this monitoring period is in line with the approved CPA-DDs and PoA-DD requirements.

Item	Parameter	Values estimated in ex ante calculation of approved PDD	Actual values achieved during this monitoring period
SDG3: Good Health and Well-Being	Smoke quantity in the kitchen while cooking	Decreased	Decreased
SDG3: Good Health and Well-Being	Frequency of illness	Decreased	Decreased
SDG6: Clean Water and Sanitation	Sanitation condition of toilet and pig pen in the households	Improved.	Improved.
SDG5: Gender Equality	Daily cooking time	Decreased	Decreased
SDG7: Affordable and Clean Energy	Change in traditional fuel consumption (% of total energy requirements)	Decreased	Decreased
SDG5: Gender Equality	Number of Households trained to use biogas and know the basic maintenance of digesters and biogas stoves	Number increased	Number increased
SDG8: Decent work and economic growth	Quantitative employment and income generation	Increased	Increased
SDG13: Climate Action	Emission reductions achieved by the PoA	876,123 tCO_2e	822,520 tCO_2e

Findings	**CAR 07** (Refer to Appendix 4)
Conclusion	CAR 07 is closed. Refer to Appendix 4 for findings' resolution. The MR includes a comparison of the actual value of outcomes with the ex-ante calculated values in the GS transition Annex for this PoA. It is confirmed that the actual values achieved during this monitoring period was found to be in line with the requirements in the GS transition Annex for this PoA.

Title and UNFCCC reference number of the CPA	Actual values achieved by the CPAs during this monitoring period	Value estimated in ex ante calculation in the included CPA-DD(s)
2898-0001	2,156	2,282[1]
2898-0002	9,919	10,502
2898-0003	9,919	10,502
2898-0004	9,919	10,502
2898-0005	9,919	10,502
2898-0006	9,919	10,502
2898-0007	9,919	10,502
2898-0008	9,919	10,502
2898-0009	9,919	10,502
2898-0010	9,919	10,502
2898-0011	9,515	10,061
2898-0012	9,515	10,061
2898-0013	9,515	10,061
2898-0014	9,515	10,061
2898-0015	9,515	10,061
2898-0016	9,515	10,061
2898-0017	9,515	10,061
2898-0018	9,515	10,061
2898-0019	9,515	10,061
2898-0020	9,515	10,061
2898-0021	9,515	10,061
2898-0022	9,515	10,061
2898-0023	9,515	10,061
2898-0024	9,515	10,061
2898-0025	9,515	10,061
2898-0026	9,515	10,061
2898-0027	9,515	10,061
2898-0028	9,515	10,061
2898-0029	9,515	10,061
2898-0030	9,515	10,061
2898-0031	9,515	10,061
2898-0032	9,515	10,061
2898-0033	9,515	10,061
2898-0034	9,515	10,061
2898-0035	9,515	10,061
2898-0036	9,515	10,502
2898-0037	9,515	10,502

[1] For the value estimated ex ante calculation in the included CPA-DDs, it's calculated based on the days in the monitoring period multiplied by the ex-ante ER value in the registered CPA-DDs. Please refer to the ER calculation sheet and the registered CPA-DDs

2898-0038	9,515	10,502
2898-0039	9,515	10,502
2898-0040	9,515	10,502
2898-0041	9,515	10,502
2898-0042	9,515	10,061
2898-0043	9,515	10,061
2898-0044	9,515	10,061
2898-0045	9,515	10,061
2898-0046	9,515	10,061
2898-0047	9,919	10,502
2898-0048	9,919	10,502
2898-0049	9,919	10,502
2898-0050	9,515	10,502
2898-0051	9,515	10,502
2898-0052	8,227	8,654
2898-0053	9,594	10,147
2898-0054	9,515	10,502
2898-0055	9,515	10,061
2898-0056	9,515	10,061
2898-0057	9,515	10,061
2898-0058	9,515	10,061
2898-0059	9,515	10,061
2898-0060	9,515	10,061
2898-0061	9,515	10,061
2898-0062	9,515	10,061
2898-0063	9,515	10,061
2898-0064	9,515	10,061
2898-0065	9,919	10,502
2898-0066	9,919	10,502
2898-0067	9,515	10,061
2898-0068	9,390	10,114
2898-0069	9,515	10,061
2898-0070	9,515	10,061
2898-0071	9,530	10,077
2898-0072	9,701	10,502
2898-0073	7,058	7,646
2898-0074	9,919	10,502
2898-0075	9,515	10,061
2898-0076	9,515	10,061
2898-0077	9,515	10,502
2898-0078	9,515	10,502
2898-0079	9,515	10,061
2898-0080	9,515	10,061
2898-0081	9,515	10,502

2898-0082	8,427	8,873
2898-0083	9,539	10,087
2898-0084	9,847	10,502
2898-0085	9,515	10,164
2898-0086	9,599	10,152
2898-0087	9,767	10,502
Total	**822,520**	**876,123**

E.3.5.7. Remarks on difference from estimated value in approved PDD

Means of verification	Compared the monitoring report with the latest approved CPA-DDs and PoA-DD, it is verified that the target related to SDG indicators has been reached compared with approved GS4GG Transition Annex of this PoA. CTI only found the actual value achieved during this monitoring period is 822,520 tCO_2e, which is 6.12% less than values (876,123 tCO_2e) estimated according to the latest approved CPA-DDs.
Findings	N/A
Conclusion	It is confirmed that the target related to SDG indicators has been reached compared with approved GS4GG Transition Annex of this PoA. Only ex-post determined ER value was found to be proportionally lower than the ex-ante estimated ER value. No further justification or explanation is deemed required as actual emissions of this MP do not exceed the ex-ante calculated emission reductions.

SECTION F. Internal quality control

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The final verification report was undergone a technical review by a qualified independent reviewer before requesting issuance of the project activity. The technical review was performed by a technical reviewer qualified in accordance with CTI's qualification scheme for CDM and GS validation and verification that meets the criteria of EB and GS guidelines for qualification.

SECTION G. Verification opinion

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The verification team assigned by the VVB (CTI) concludes that the 7th periodic verification of CDM programme of activities "Sichuan Rural Poor-Household Biogas Development Programme" in Sichuan Province, China, as described in the latest approved PoA-DD (Version 2, 30/10/2017) and monitoring report (version 2, 04/09/2019), meets all relevant requirements set by the Gold Standard for the Global Goals Principles and Requirements and relevant guidance provided by CMP, CDM and relevant guidance provided by CMP and the CDM Executive Board.

The project activity was correctly implemented according to selected monitoring methodology and monitoring plan. The collected monitoring data allowed to verify the amount of achieved GHG emission reductions. And the PoA is contributed to sustainability development. Thus, the VVB is pleased to issue a positive verification opinion.

SECTION H. Certification statement

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Shenzhen CTI International Certification Co., Ltd (CTI) has performed the 7th periodic verification of the emission reductions that have been reported for the CDM programme of activities "Sichuan Rural Poor-Household Biogas Development Programme" in Sichuan Province, P. R. China for the period 01/01/2018 to 31/12/2018.

The verification is based on the baseline and monitoring methodology AMS-I.I.– Biogas/biomass thermal applications for households/small users (version 04) and AMS-III.R.– Methane recovery in agricultural activities at household/small farm level (version 02), the latest approved PoA-DD (Version 2, 30/10/2017), the latest approved CPA-DDs for CPA 2898-0001 to 2898-0087 and the monitoring report (Version 2, dated 04/09/2019). The verification consisted of the following three phases: i) desk review of the project design and the baseline and monitoring plan; ii) follow-up on-site visit and interviews with project participants; iii) resolution of outstanding issues and the issuance of the final verification and certification report.

The CME are responsible for the collection, calculation and determination of the GHG data in accordance with the monitoring plan and the reporting of GHG emission reductions on the basis set out within the project monitoring report.

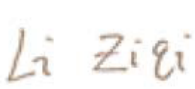
It is CTI's responsibility to provide an independent verification statement on the reported GHG emission reductions for the project. Based on an understanding of the risks associated with reporting of GHG emission data and the controls in place to mitigate these, CTI planned and performed our work to obtain the information and explanations that we considered necessary to provide reasonable assurance that reported GHG emission reductions are fairly stated.

CTI confirms that the GHG emission reductions are calculated without material misstatements. Based on the evidence and information that are considered necessary to guarantee that GHG emission reductions are appropriately calculated, CTI confirms that the emission reductions from the "Sichuan Rural Poor-Household Biogas Development Programme" in Sichuan Province, P. R. China during the monitoring period 01/01/2018 to 31/12/2018 as follows:

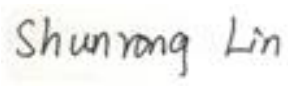
Monitoring Period Number: 7th

Monitoring period: 01/01/2018 to 31/12/2018

Emission reductions: 822,520 t CO_2e



Mr. Li Ziqi
Team Leader
05/09/2019



Shunrong Lin
Technical Reviewer
05/09/2019

Appendix 1. Abbreviations

Abbreviations	Full texts
AQL	Acceptable Quality Level
BE	Baseline Emissions
Board	Executive Board of the clean development mechanism
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CDM-EB	CDM Executive Board (the board)
CER	Certified Emission Reductions
CH_4	Methane
CL	Clarification Request
CME	Coordinating/Managing Entity
CMP	Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol
CO_2	Carbon Dioxide
CO_2e	Carbon Dioxide Equivalent
COP	Conference of the Parties
CPA	Component Project Activity
CPA-DD	Component project activity design document
CTI	Shenzhen CTI International Certification Co., Ltd
DNA	Designated National Authority
ER	Emission Reduction
FAR	Forward Action Request
GHG	Greenhouse Gas
GS	Gold Standard
GS4GG	Gold Standard for the Global Goals
GS-TAC	Technical Advisory Committee of GS
GSP	Gold Standard Passport
GWP	Global Warming Potential
MoC	Modalities of communication
MoV	Means of Verification
MP	Monitoring Plan
MR	Monitoring Report
PE	Project Emission
PoA	Programme of Activities
PoA-DD	PoA Design Document
PRC	Post Registration Change
PS	Project Standard
QA/QC	Quality Assurance / Quality Control
SD	Sustainability Development
SDI	Sustainability Development Indicator
SDM	SD Matrix
SREO	Sichuan Rural Energy Office
SS	Sectoral Scope
SSC	Small-scale
TA(s)	Technical Area(s)
UNFCCC	United Nations Framework Convention on Climate Change
UQL	Unacceptable Quality Level
VVB	Validation and Verification Body
VVS	Validation and Verification Standard

Appendix 2. Competence of team members and technical reviewers

CERTIFICATE OF APPOINTMENT

Mr. Ziqi LI

Satisfies the requirements of competence management system of CTI Certification, and is hereby appointed as:

Qualification						
Status	GHG Auditor	Validator	Verifier	Team Leader	Technical Reviewer	Technical Expert
Date	√	√	√	√	-	√

Scope	Technical Area
SS 1: Energy industries (renewable/non-renewable sources)	TA 1.2: Energy generation from renewable energy sources
SS 5: Chemical industry	TA 5.1: Chemical industry
	TA 5.2: Caprolactam, nitric and adipic acid
SS 11: Fugitive emissions from production and consumption of halocarbons and sulphur hexafluoride	TA 11.1: Emissions of fluorinated gases
	TA 11.2: Refrigerant gas production
SS 12: Solvents use	TA 12.1: Chemical industry

This appointment is valid for 3 years from its date of approval below and is bound by internal requirements of management system of the Certification Body of CTI.

Approved by:

Wu LIN Wu Lin

Technical Competent Manager

Shenzhen, 01/01/2018

CERTIFICATE OF APPOINTMENT

Mr. Qinghua DAI

Satisfies the requirements of competence management system of CTI Certification, and is hereby appointed as:

Qualification						
Status	GHG Auditor	Validator	Verifier	Team Leader	Technical Reviewer	Technical Expert
Date	-	-	-	-	-	√

Scope	Technical Area
SS 13: Waste handling and disposal	TA 13.2: Manure
SS 15: Agriculture	TA 15.1: Agriculture

This appointment is valid for 3 years from its date of approval below and is bound by internal requirements of management system of the Certification Body of CTI.

Approved by:

Wu LIN Wu Lin

Technical Competent Manager

Shenzhen, 28/06/2018

CERTIFICATE OF APPOINTMENT

Ms. Shunrong LIN

Satisfies the requirements of competence management system of CTI Certification, and is hereby appointed as:

Qualification						
Status	GHG Auditor	Validator	Verifier	Team Leader	Technical Reviewer	Technical Expert
Date	√	√	√	√	√	√

Scope	Technical Area
SS 1: Energy industries (renewable/non-renewable sources)	TA 1.2: Energy generation from renewable energy sources
SS 14: Afforestation and reforestation	TA 14.1: Afforestation and reforestation
SS 15: Agriculture	TA 15.1: Agriculture

This appointment is valid for 3 years from its date of approval below and is bound by internal requirements of management system of the Certification Body of CTI.

Approved by:

Wu LIN Wu Lin

Technical Competent Manager

Shenzhen, 01/01/2018

Appendix 3. Documents reviewed or referenced

No.	Author	Title	References to the document	Provider
/1/	Chengdu Oasis Science & Technology Co., Ltd.	Monitoring Report (the 7th monitoring period), including CPA Nb. SCHHBG-2010-001 to CPA Nb. SCHHBG-2014-087, Version 1 for GSC, dated 27/05/2019;	https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/5BGM96VOK3ATN4JPR70XSWIQ8CZH2F/view?cp=1	CME
/2/	Chengdu Oasis Science & Technology Co., Ltd.	Monitoring Report (the 7th monitoring period), including CPA Nb. SCHHBG-2010-001 to CPA Nb. SCHHBG-2014-087, Version 2, dated 04/09/2019	-	CME
/3/	Chengdu Oasis Science & Technology Co., Ltd.	Registered PoA-DD: Sichuan Rural Poor-Household Biogas Development Programme version 1.6, dated 03/04/2012	https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/5BGM96VOK3ATN4JPR70XSWIQ8CZH2F/view?cp=1	CME
/4/	Chengdu Oasis Science & Technology Co., Ltd.	Latest approved PoA-DD: Sichuan Rural Poor-Household Biogas Development Programme version 2, dated 30/10/2017	https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/5BGM96VOK3ATN4JPR70XSWIQ8CZH2F/view?cp=1	CME
/5/	Chengdu Oasis Science & Technology Co., Ltd.	Registered CPA-DD Generic: Sichuan Rural Poor-household Biogas Development Programme, CPA Nb. SCHHBG-20XX-XX, version 1.4, dated 03/04/2012	https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/5BGM96VOK3ATN4JPR70XSWIQ8CZH2F/view?cp=1	CME
/6/	Chengdu Oasis Science & Technology Co., Ltd.	Registered CPA-DD specific: Sichuan Rural Poor-Household Biogas Development Programme, CPA Nb. SCHHBG-2010-001, version 1.4, dated 03/04/2012	https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/5BGM96VOK3ATN4JPR70XSWIQ8CZH2F/view?cp=1	CME
/7/	Chengdu Oasis Science & Technology Co., Ltd.	Registered CPA-DD specific: CPA Nb. SCHHBG-2012-002 to CPA Nb. SCHHBG-2012-053, version 1.1, dated 09/04/2013	https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/5BGM96VOK3ATN4JPR70XSWIQ8CZH2F/view?cp=1	CME
/8/	Chengdu Oasis Science & Technology Co., Ltd.	Registered CPA-DD specific: CPA Nb. SCHHBG-2013-054 to CPA Nb. SCHHBG-2013-073, version 1.2, dated 14/03/2014	https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/5BGM96VOK3ATN4JPR70XSWIQ8CZH2F/view?cp=1	CME
/9/	Chengdu Oasis Science & Technology Co., Ltd.	Registered CPA-DD specific: CPA Nb. SCHHBG-2014-074 to CPA Nb. SCHHBG-2014-087, version 1.3, dated 14/01/2015	https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/5BGM96VOK3ATN4JPR70XSWIQ8CZH2F/view?cp=1	CME
/10/	Chengdu Oasis Science & Technology Co., Ltd.	Latest Approved CPA-DD specific (after post-registration change): CPA Nb. SCHHBG-2010-001 version 1.8 dated 30/10/2017	https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/5BGM96VOK3ATN4JPR70XSWIQ8CZH2F/view?cp=1	CME
/11/	Chengdu Oasis Science & Technology Co., Ltd.	Latest Approved CPA-DD specific (after post-registration change): CPA Nb. SCHHBG-2012-002 to CPA Nb. SCHHBG-2012-053, version 1.4, dated 30/10/2017	https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/5BGM96VOK3ATN4JPR70XSWIQ8CZH2F/view?cp=1	CME
/12/	Chengdu Oasis Science & Technology Co., Ltd.	Latest Approved CPA-DD specific (after post-registration change): CPA Nb. SCHHBG-2013-054 to CPA Nb. SCHHBG-2012-073,	https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/5BGM96VOK3ATN4JPR70XSWIQ8CZH2F/view?cp=1	CME

		version 1.4, dated 30/10/2017		
/13/	Chengdu Oasis Science & Technology Co., Ltd.	Latest Approved CPA-DD specific (after post-registration change): CPA Nb. SCHHBG-2014-074 to CPA Nb. SCHHBG-2012-087, version 1.5, dated 30/10/2017	https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/5BGM96VOK3ATN4JPR70XSWIQ8CZH2F/view?cp=1	CME
/14/	Chengdu Oasis Science & Technology Co., Ltd.	Emission Reduction Calculation spreadsheet Initial Version 1, 27/05/2019 corresponding to MR for GSC	-	CME
/15/	Chengdu Oasis Science & Technology Co., Ltd.	Emission Reduction Calculation spreadsheet Final Version 2, 16/08/2019 corresponding to MR for EB submission	-	CME
/16/	Chengdu Oasis Science & Technology Co., Ltd.	Sample size calculation spreadsheet	-	CME
/17/	Chengdu Oasis Science & Technology Co., Ltd.	Survey list of the 200 samples in Apr - May 2019	-	CME
/18/	Chengdu Oasis Science & Technology Co., Ltd.	Questionnaire paper that filled by the investigated households during sampling survey;	-	CME
/19/	Chengdu Oasis Science & Technology Co., Ltd.	Table of checked and accepted documents for all constructed biogas digesters	-	CME
/20/	Chengdu Oasis Science & Technology Co., Ltd.	Sample of manual check and acceptance records of the included CPAs	-	CME
/21/	Chengdu Oasis Science & Technology Co., Ltd.	Training material copy, photos of the training courses and training records of the survey staff of this PoA	-	CME
/22/	Chengdu Oasis Science & Technology Co., Ltd.	CDM GHG Monitoring Manual (incl. procedures and forms)	-	CME
/23/	Chengdu Oasis Science & Technology Co., Ltd.	Organization Chart of CME and CPA implementer and their responsibilities	-	CME
/24/	Chengdu Oasis Science & Technology Co., Ltd.	Operation manual of data management system of the PoA	-	CME
/25/	Chengdu Oasis Science & Technology Co., Ltd.	Commission record of the bio-digesters and biogas stoves	After the installation of the bio-digesters and biogas stoves, they have been inspected as acceptance testing (commissioning) for proper operation in compliance with specifications. The acceptance check date of each subsystem	CME

			has been recorded.	
/26/	Sichuan Rural Energy Office	Statement on the number of household equipped with biogas digester in this PoA ((from CPA Nb. SCHHBG-2010- 001 to CPA Nb. SCHHBG-2014-087)	-	CME
/27/	Sichuan Rural Energy Office	Statement on the existing number of household equipped with biogas digester and the number of household included in each CPA (from CPA Nb. SCHHBG-2010- 001 to CPA Nb. SCHHBG-2014-087)	-	CME
/28/	Sichuan Rural Energy Office	Household list that included in each CPA (from CPA Nb. SCHHBG-2010-001 to CPA Nb. SCHHBG-2014-087)	-	CME
/29/	Chengdu Oasis Science & Technology Co., Ltd.	Comprehensive baseline survey records conducted in Jun, 2010 before the PoA's commissioning.	-	CME
/30/	Sichuan Rural Energy Office	Biogas stove test report	-	CME
/31/	Chengdu Oasis Science & Technology Co., Ltd.	The IT system to collect and analyze the monitoring survey data	-	CME
/32/	CDM Executive Board	Approved CDM methodology: AMS-I.I.: Biogas/biomass thermal applications for households/small users (version 04.0) (EB68, Annex 25)	https://cdm.unfccc.int/methodologies/DB/3WJ6C7R0JFA62VYA2Z2K6WE1RK1PXI	UNFCCC website
/33/	CDM Executive Board	Approved CDM methodology: AMS-III.R.: Methane recovery in agricultural activities at household/small farm level (version 02) (EB59, Annex 4)	http://cdm.unfccc.int/methodologies/DB/JQHRMGL23TWZ081T6G7G1RZ63GM1BZ	UNFCCC website
/34/	CDM Executive Board	CDM Standard: CDM validation and verification standard for programmes of activities (version 02.0)	EB93, Annex 8 https://cdm.unfccc.int/Reference/Standards/index.html	UNFCCC website
/35/	CDM Executive Board	CDM Standard: CDM project standard for programmes of activities (version 02.0)	EB93, Annex 7 https://cdm.unfccc.int/Reference/Standards/index.html	UNFCCC website
/36/	CDM Executive Board	CDM Procedure: CDM project cycle procedure for programmes of activities (version 02.0)	EB93, Annex 9 https://cdm.unfccc.int/Reference/Procedures/index.html	UNFCCC website
/37/	CDM Executive Board	Gold standard for the global goals Monitoring report (version 1, June 2017)	https://globalgoals.goldstandard.org/	GS website
/38/	CDM Executive Board	Glossary CDM terms, version 09.1	https://cdm.unfccc.int/filestorage/e/x/t/extfile-20170831165430180-Glos_CDMv9_1.pdf/Glos_CDMv9_1.pdf?t=cVJ8cGF2YW1tfDBIBx7j_C9IBdVNo3GCq07H	UNFCCC website
/39/	CDM Executive Board	Application of the global warming potentials to Clean Development Mechanism project activities and programme of activities for the second commitment period of the Kyoto Protocol	Para. 66 of EB69 meeting report	UNFCCC website

/40/	CDM Executive Board	Guidelines for Sampling and Surveys for CDM Project Actives and Programme of Activities, version 4.0, 16/10/2015	EB 67, Annex 6 https://cdm.unfccc.int/Reference/Guidclarif/index.html	UNFCCC website
/41/	CDM Executive Board	Standard for Sampling and Surveys for CDM Project Activities and Programme of Activities, version 05.0, dated 16/10/2015 Standard for Sampling and Surveys for CDM Project Activities and Programme of Activities, version 07.0, dated 04/05/2017	EB86, Annex 3 EB94, Annex 2 https://cdm.unfccc.int/Reference/Standards/index.html	UNFCCC website
/42/	Sichuan Statistics Bureau	Sichuan Statistical Yearbook 2018	http://tjj.sc.gov.cn/tjcbw/tjnj/2018/zk/indexch.htm	Public Website
/43/	Chinese DNA	Chinese DNA's Guideline of emission factors of Chinese grids 2017	http://qhs.mee.gov.cn/kzwsqtpf/201812/P020181220579925103092.pdf	China DNA Official Website
/44	IPCC	2006 IPCC Guidelines for National Greenhouse Gas Inventories: work book	https://www.ipcc-nggip.iges.or.jp/public/2006gl/index.html	IPCC website
/45/	Chinese National Standard	Standard for household biogas digesters in Sichuan province, GB/T 3606-2001: Domestic Biogas Stove	www.china-nengyuan.com/tech/93670.html	Public Website
/46/	Ministry of Agriculture of the P.R. China	National rural biogas project construction plan (2006-2010)	http://jiuban.moa.gov.cn/zwllm/tzgg/tz/200704/t20070418_805366.htm	Public Website
/47/	TÜV NORD	Validation Report for CDM PoA Sichuan Rural Poor-Household Biogas Development Programme, version 01, dated 05/04/2012, issued by TÜV NORD	https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/5BGM96VOK3ATN4JPR70XSWIQ8CZH2F/view?cp=1	UNFCCC website
/48/	TÜV NORD	Validation Report for CPA inclusion Sichuan Rural Poor-Household Biogas Development Programme, CPA Nb. SCHHBG-2010-001, version 01, dated 2012-04-05, issued by TÜV NORD	https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/5BGM96VOK3ATN4JPR70XSWIQ8CZH2F/view?cp=1	UNFCCC website
/49/	TÜV NORD	Validation Reports for CPA inclusion Sichuan Rural Poor-Household Biogas Development Programme, CPA Nb. SCHHBG-2012-002 to CPA Nb. SCHHBG-2012-053, version 01, dated 10/04/2013	https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/5BGM96VOK3ATN4JPR70XSWIQ8CZH2F/view?cp=1	UNFCCC website
/50/	TÜV NORD	Validation Reports for CPA inclusion Sichuan Rural Poor-Household Biogas Development Programme, CPA Nb. SCHHBG-2013-054 to CPA Nb. SCHHBG-2013-073, version 01, dated 20/03/2014	https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/5BGM96VOK3ATN4JPR70XSWIQ8CZH2F/view?cp=1	UNFCCC website
/51/	TÜV NORD	Validation Reports for CPA inclusion Sichuan Rural Poor-Household Biogas Development Programme, CPA Nb. SCHHBG-2014-074 to CPA Nb. SCHHBG-2014-087, version 01, dated 14/01/2015	https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/5BGM96VOK3ATN4JPR70XSWIQ8CZH2F/view?cp=1	UNFCCC website
/52/	GLC	Verification Report for the 1st monitoring period version 06 dated	https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/5BGM9	UNFCCC website

		26/08/2013, issued by GLC and 1st monitoring period monitoring report (version 1.4.1)	6VOK3ATN4JPR70XSWIQ8CZH2F/view?cp=1	
/53/	GLC	Verification Report for the 2nd monitoring period, version 05 dated 17/06/2014, issued by GLC and 2nd monitoring period monitoring report (version 2.1)	https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/5BGM96VOK3ATN4JPR70XSWIQ8CZH2F/view?cp=1	UNFCCC website
/54/	BV	Verification Report for the 3rd monitoring period, version 01.2 dated 01/12/2015, issued by BVC and 3rd monitoring period monitoring report (version 1.2)	https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/5BGM96VOK3ATN4JPR70XSWIQ8CZH2F/view?cp=1	UNFCCC website
/55/	BV	Verification Report for the 4th monitoring period, version 2.1 dated 31/12/2018, issued by BVC and 4th monitoring period monitoring report (version 2.1)	https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/5BGM96VOK3ATN4JPR70XSWIQ8CZH2F/view?cp=1	UNFCCC website
/56/	GLC	Validation Opinion on Post-Registration Changes of Registered CDM PoA: Sichuan Rural Poor-Household Biogas Development Programme, version 05, dated 26/08/2013 issued by GLC approved by EB on 03/01/2014	https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/5BGM96VOK3ATN4JPR70XSWIQ8CZH2F/view?cp=1	UNFCCC website
/57/	TÜV NORD	Validation Opinion on Post-Registration Changes of Registered CDM PoA: Sichuan Rural Poor-Household Biogas Development Programme, (PRC ref no: PRC-2898-001), version 02, dated 09/11/2017 issued by TÜV NORD approved by EB on 11/12/2017	http://cdm.unfccc.int/PRCContainer/DB/prcp617554437/view	UNFCCC website
/58/	CTI	On-site picture: pigpens, biogas digesters, living condition of each household, On-site information collected table and 85 questionnaires filled by randomly selected sampling households	-	-
/59/	Sichuan Rural Energy Office	Coal stove test report	-	CME
/60/	Chengdu Oasis Science & Technology Co., Ltd.	Monitoring report for sustainable development co-benefits	-	CME
/61/	National Bureau of statistics	China Energy Statistics Yearbook 2016	http://www.stats.gov.cn/	Public Website
/62/	Sichuan Rural Energy Office and Chengdu Oasis Science & Technology Co., Ltd.	Small scale SRS pre-survey	Small scale SRS pre-survey record in Apr 2011	CME
/63/	CDM Executive Board	"Applicability of sectoral scopes" (version 01.0, EB88, Annex 04)	EB88 https://cdm.unfccc.int/Reference/Standards/index.html	UNFCCC website
/64/	Local Rural	Routine maintenance check records	Routine maintenance check	CME

	Energy Office		records for the sample household with digester stop in year 2017	
/65/	The Gold Standard	GS passport (PoA and CPA 001) for Sichuan Rural Poor-Household Biogas Development Programme, version 2.3, 23/04/2013; GS passport (CPAs 0003 to 0053 excluding CPA 0027 and 0052) for Sichuan Rural Poor-Household Biogas Development Programme, version 1.2, 10/07/2013; GS passport (CPAs 0002, 0027 and 0052) for Sichuan Rural Poor-Household Biogas Development Programme, version 1.3, 22/08/2013; GS passport (CPAs 0054 to 0073excluding CPA 0065, CPA 0068 and CPA0072) for Sichuan Rural Poor-Household Biogas Development Programme, version 1.1, 14/03/2014; GS passport (CPA 0065 , CPA0068 and CPA0072) for Sichuan Rural Poor-Household Biogas Development Programme, version 1.2, 18/04/2014; GS passport (CPAs 074 to 0087 excluding CPA 0086) for Sichuan Rural Poor-Household Biogas Development Programme, version 1.1, 02/02/2015, inclusion date 19/03/2015 ; GS passport (CPA 086) for Sichuan Rural Poor-Household Biogas Development Programme, version 1.2, 26/03/2015;	https://registry.goldstandard.org/projects/details/1706	Gold Standard website
/66/	The Gold Standard	Gold Standard for the Global Goals Principles and Requirements	Gold Standard for the Global Goals Principles and Requirements, version 1.1 https://globalgoals.goldstandard.org/	GS website
/67/	The Gold Standard	Gold Standard for the Global Goals Safeguarding Principles & Requirements	Gold Standard for the Global Goals Safeguarding Principles & Requirements, version 1.1 https://globalgoals.goldstandard.org/	GS website
/68/	CME	GS-CERs Monitoring & Management Manual	-	CME
/69/	The Gold Standard	Validation report and Periodic MRs and Verification reports of GS PoA	https://registry.goldstandard.org/projects/details/1706	Gold Standard website
/70/	Local Rural Energy Office (REO)	Payrolls, payment records to local technicians for the workload by the local Rural Energy Office (REO) after the acceptance check of digesters	-	CME
/71/	SREO	A list of technicians who participated in the digesters construction	-	CME

/72/	CME	Twenty technicians were randomly selected from a list of technicians who participated in the digesters construction and interviewed by the CME, the records of the interview result	-	CME
/73/	Chengdu Oasis Science & Technology Co., Ltd.	Local rural energy offices: comment book for stakeholders inputs	-	CME
/74/	Sichuan Statistics Bureau	Sichuan Statistical Bureau	http://www.sc.stats.gov.cn/tjcbw/tjnj/	Public Website
/75/	The Gold Standard	Gold Standard for the Global Goals GHG Emission Reductions & Sequestration Project Requirements	Gold Standard for the Global Goals GHG Emission Reductions & Sequestration Project Requirements, version 1.1 https://globalgoals.goldstandard.org/	GS website
/76/	The Gold Standard	Gold Standard Gender Equality Guidelines and Requirements	Gold Standard Gender Equality Guidelines and Requirements, version 1.1 https://globalgoals.goldstandard.org/	GS website
/77/	The Gold Standard	Gold Standard for the Global Goals Transition Annex	Gold Standard for the Global Goals Transition Annex approved by GS on 31/01/2018 for this PoA	PP

Appendix 4. Clarification requests, corrective action requests and forward action requests

Table 1. Remaining FARs from validation and/or previous verification

FAR ID	N/A	**Section no.**		**Date:**
Description of FAR				
CME response				**Date:**
Documentation provided by the CME				
VVB assessment				**Date:**

Table 2. CLs from this verification

CL ID	N/A	**Section no.**		**Date:**
Description of CL				
CME response				**Date:**
Documentation provided by the CME				
VVB assessment				**Date:**

Table 3. CARs from this verification

CAR ID	01	**Section no.**	Cover Page	**Date:** 20/08/2019
Description of CAR				
In the MR version 1, duration of this monitoring period is not complete.				
CME response				**Date:** 04/09/2019
Revised. The monitoring period is 01/01/2018-31/12/2018 (both days are included). See revised MR (version 2)				
Documentation provided by the CME				
MR (version 2)[/2/]				
VVB assessment				**Date:** 05/09/2018
The revised MR is checked, it is confirmed that the duration of this monitoring period is complete with both days are included. CAR 01 is closed.				

CAR ID	02	**Section no.**	D.2	**Date:** 20/08/2019
Description of CAR				
In the MR version 1, for the SDG 3, 6, 5, 7, 8 indicators, it is observed that description in “purpose of data” is not correct. The SDG target is not listed in GS passport.				
CME response				**Date:** 04/09/2019
Revised. The purpose of data is to check whether SDG target of GS4GG transition Annex of this PoA has been reached. See MR (version 2) for details				
Documentation provided by the CME				
MR (version 2)[/2/] Gold Standard for the Global Goals Transition Annex[/77/]				
VVB assessment				**Date:** 05/09/2018

The revised MR is checked, it is confirmed that the passport has been revised to GS4GG transition Annex of this PoA, the revision is correct and verified by checking the transition Annex of this PoA[/77/]. CAR 02 is closed.

CAR ID	03	**Section no.**	D.2	**Date:** 20/08/2019
Description of CAR				
In the MR version 1, for the SDG 13, it stated that the ER achieved by the project, however, it is a PoA project.				
CME response				**Date:** 04/09/2019
Revised. The description has been revised to be: ER achieved by the PoA. See MR (version 2).				
Documentation provided by the CME				
MR (version 2)[/2/]				
VVB assessment				**Date:** 05/09/2018
The revised MR is checked, it is confirmed that the project has been revised to PoA which is applicable to this PoA. CAR 03 is closed.				

CAR ID	04	**Section no.**	D.3	**Date:** 20/08/2019
Description of CAR				
In the MR version 1, the monitoring survey period is not correct for this monitoring period.				
CME response				**Date:** 04/09/2019
Typo mistake. Revised. See MR (version 2).				
Documentation provided by the CME				
MR (version 2)[/2/] Survey list of the 200 samples in Apr - May 2019[/17/]				
VVB assessment				**Date:** 05/09/2018
The revised MR is checked, it is confirmed that the monitoring survey period is revised to Apr - May 2019 which is verified as correct by checking the Survey list of the 200 samples in Apr - May 2019[/17/]. CAR 04 is closed.				

CAR ID	05	**Section no.**	E.4	**Date:** 20/08/2019
Description of CAR				
In the MR version 1, the SDG 13 is missing in section E.4 table.				
CME response				**Date:** 04/09/2019
Added. See MR (version 2)				
Documentation provided by the CME				
MR (version 2)[/2/]				
VVB assessment				**Date:** 05/09/2018
The revised MR is checked, it is confirmed that the SDG 13 is added into the table of section E.4. ER achieved during the monitoring period, Baseline emission and Project emission has been added and are confirmed as correct by checking the ER sheet. CAR 05 is closed.				

CAR ID	06	**Section no.**	E.5	**Date:** 20/08/2019
Description of CAR				
In the MR version 1, the SDG 13 is missing in section E.5 table.				
CME response				**Date:** 04/09/2019
Added. See MR (version 2).				
Documentation provided by the CME				
MR (version 2)[/2/]				
VVB assessment				**Date:** 05/09/2018
The revised MR is checked, it is confirmed that the SDG 13 is added into the table of section E.5. Actual ER value and estimated one in PDD has been listed and the values are confirmed as correct by checking the ER sheet and PDD. CAR 06 is closed.				

CAR ID	07	**Section no.**	F.1	**Date:** 20/08/2019

Description of CAR	
In the MR version 1, the continuous input /grievance mechanism channels are not listed in section F.1.	
CME response	**Date:** 04/09/2019
Added. In order to attract more active and continuous stakeholders and get more stakeholder feedback, the CME proposed the three methods of continuous input & grievance expression: 1) Comment book. It's available at the reception room of each involved local rural energy office. All stakeholders have access to provide feedback on comment books. The contact information of Sichuan Rural energy office is listed on the first page of the comment book for each local office. 2) Telephone access. Stakeholders can also provide comments via phone. The telephone number of Sichuan Rural energy office (Contact info: Song Yumin, Sichuan rural energy office, 028-85534729) is provided to contact. 3) Internet/email access. Email address of Sichuan Rural energy office is provided as well for stakeholders to provide comments in the internet. Contact info: Song Yumin, Sichuan rural energy office, scnnjnjp@163.com. 4) Access to Gold Standard. Emails (info@goldstandard.org) as well as the GS telephone number +41 (0) 22 788 7080 has been published as well for stakeholder's comments. See MR (version 02).	
Documentation provided by the CME	
MR (version 2)[/2/]	
VVB assessment	**Date:** 05/09/2018
In the course of this verification CTI found the four channels to collect continuous input & grievance expression were well established. Through checking the comments book[/73/], interview with the personnel in charge of telephone and E-mail access (Mr. Song Yumin of Sichuan Rural energy office) CTI is able to confirm that during this monitoring period, no comments were received via comment book, contact person, telephone and email access. CAR 07 is closed.	

Table 4. FARs from this verification

FAR ID	xx	Section No.		Date: DD/MM/YYYY
Description of FAR				
CME response				**Date:** DD/MM/YYYY
Documentation provided by the CME				
VVB assessment				**Date:** DD/MM/YYYY