3.5 MW MANUNI HYDRO ELECTRIC PROJECT IN HIMANCHAL PRADESH BY WINSOME TEXTILE INDUSTRIES LTD

Document Prepared by Earthood Services Private Limited

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Summary:

Earthood Services Private Limited (hereafter referred to as ESPL) has been contracted by EcoCapita Consulting Private Limited (hereafter referred to as EcoCapita) to conduct the second verification of the project - “3.5 MW Manuni Hydro Electric Project in Himanchal Pradesh by Winsome Textile Industries Ltd”, VCS ID 1861 with regards to the relevant requirements of VCS Programme Guide v4.1 and VCS Standard v4.2. Relevant requirements of the UNFCCC for CDM project activities, as well as criteria for consistent project operations, monitoring and reporting has been applied for verification.

The verification includes confirming the implementation of the monitoring plan of the registered VCS Project Description and Monitoring Report (VCS ID 1861) and the application of the monitoring methodology as per AMS-I.D. version 18 "Grid Connected Renewable Electricity Generation".

3.5 MW Manuni Hydro Electric Project is a run-of-the-river small power project, where water from the river (Beas) is diverted through the powerhouse to generate renewable power. The small hydro power project has been constructed in the existing water bodies i.e., no water reservoir has been constructed for the project activity. The project site is located in the village of Khaniyara, Dharmashala in Kangra district, of Himachal Pradesh. The nearest airport is 40 km away at Dharamshala. The project has an installed capacity of 3.5 MW (2 x 1.750 MW). The project activity is generating electricity and using it for captive consumption at its manufacturing unit Baddi.

The project was commissioned at 31/03/2017. The purpose of the project activity is to produce renewable energy using hydro power for captive consumption. In the absence of the project

activity equivalent amount of electricity would have been generated by the operation of grid connected fossil-fuel dominated based power plants.

During the current monitoring period from 01/01/2020 to 31/12/2021 (both days included) the project activity has supplied 24,045 MWh of electricity, and thus contributing to 22,246 tCO_2e of GHG reductions.

The verification consisted of three phases: a. Desk review of the project; b. Follow-up remote audit; c. Resolution of outstanding issues and issuance of the final verification report and opinion. The overall verification, from Contract Review to Verification Report & Opinion, was conducted following ESPL's internal quality procedures.

A risk-based approach has been followed to perform this verification. During verification, 00 Corrective Action request (CARs), 00 Forward Action request (FARs), and 04 Clarification request (CLs) were raised and successfully closed.

Resolution of outstanding issues and issuance of the final verification report and opinion. The overall verification, from Contract Review to Verification Report & Opinion, was conducted following ESPL's internal quality procedures.

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1 INTRODUCTION

1.1 Objective

Earthood Services Private Limited (ESPL) has been contracted by EcoCapita Consulting Private Limited (EcoCapita), to undertake the second verification of the renewable energy project titled "3.5 MW Manuni Hydro Electric Project in Himanchal Pradesh by Winsome Textile Industries Ltd." (VCS ID-1861). The verifiers have reviewed the GHG data collected to date for the monitoring period from 01/01/2020 to 31/12/2021 (both days included) covered in this verification. The objective of this verification is a thorough and independent assessment of registered project activities against the applicable VCS requirement by the VVB. The verification process shall determine whether the proposed project activity complies with the requirements of latest VCS guidelines, applicability conditions of the selected methodology, relevant host country regulations and guidance issued by the VCS Board.

1.2 Scope and Criteria

The scope of the verification is to establish/verify that:

- The appropriate VCS-MR form (and other templates) was used and correctly filled up; (as per (https://verra.org/project/vcs-program/rules-and-requirements)
- The project activity is in accordance with all relevant host country criteria (India).
- The project activity is in accordance with VCS standard 4.2/11/ and VCS program guide 4.1/12/.
- The project activity falls under Sectoral Scope: 01 - Energy industries (renewable / non-renewable sources); Project Type: I - Renewable Energy Projects.
- The project activity is in accordance with conditions of the latest version of applied methodology AMS-I.D version 18: "Grid Connected Renewable Electricity Generation"/07/.
- The project is not a grouped project as well as a non- AFOLU project.

The verification of the project activity is based on the VCS-PD and estimated GHG emission reduction calculations.

1.3 Level of Assurance

The level of assurance of the verification report falls under reasonable assurance engagements. Reasonable assurance is a high level of assurance regarding material misstatements, but not an absolute one.

Reasonable assurance includes the understanding that there is a remote likelihood that material misstatements will not be prevented or detected on a timely basis. To achieve reasonable assurance, the auditor needs to obtain sufficient appropriate audit evidence to reduce audit risk to an acceptably low level. This means that there is some uncertainty arising from the use of sampling, since it is possible that a material misstatement will be missed.

The evidence used to achieve a reasonable level of assurance is specified in section 2.3 and 2.4 of this report.

1.4 Summary Description of the Project

3.5 MW Manuni Hydro Electric Project is a run-of-the-river small power project, where water from the river (Beas) is diverted through the powerhouse to generate renewable power. The small hydro power project has been constructed in the existing water bodies i.e., no water reservoir has been constructed for the project activity. The project was allotted to the M/s Winsome Textile Industries Ltd. on a Build, Own, Operate and Maintain (BOOM) basis for a period of 40 years.

The project site is located in the village of Khaniyara, Dharmashala, in Kangra district, of Himachal Pradesh. The nearest airport is 40 km away at Dharamshala. The project has an installed capacity of 3.5 MW (2 x 1.750 MW). The project activity is generating electricity and using it for captive consumption at its manufacturing unit Baddi.

The project was commissioned at 31/03/2017. The purpose of the project activity is to produce renewable energy using hydro power for captive consumption. In the absence of the project activity equivalent amount of electricity would have been generated by the operation of grid connected fossil-fuel dominated based power plants.

The project activity has geographical coordinates of latitude 32˚11’ 30” N and longitude 76˚ 11’30”E.Location of the project was verified through Google Earth (https://www.google.com/intl/en_in/earth/)/14/ and found consistent with the data provided in the registered Project Description /01/. The project activity had started construction in 2011 and was commissioned on 31/03/2017. The same was verified against the registered VCS PD/01/ and commissioning certificates/09/.

The crediting period of the project activity is from 31/03/2017 to 30/03/2027. The emission reductions from the project activity during the period 01/01/2020 to 31/12/2021 (including both days) amount to 22,246 tCO2e and the total net electricity generated is 24,045 MWh.

The project activity is undergoing second verification under the first crediting period and the implementation of project activity is also verified. Based on the assessment of the documents, the assessment team can confirm that the project activity is fully functional and implemented as described in the registered VCS PD/01/ and the Monitoring Report/02/.

2 VERIFICATION PROCESS

The registered VCS project is undergoing second verification of the first crediting period, the approach adopted to ensure the quantity of emission reductions is described in the following sub sections.

2.1 Method and Criteria

The verification process consists of the following three phases:

- A document review of the VCS PD/01/ and VCS MR/02/ (described in Section 2.2)
- Remote audit and follow up interviews with project stakeholders/08/ (described in Section 2.3 and 2.4)
- The resolution of outstanding issues and issuance of the final report and opinion. (Described in Section 2.5)

VVB's Sampling Approach: No sampling approach was required for undertaking the current verification since all monitored data was verified by the assessment team.

2.2 Document Review

The verification is performed primarily as a document review of the documents submitted at various stages of assessments. The review is performed by assessment team using dedicated protocols. The assessment team cross checks the information provided in the documents (PD/01/, MR/02/, validation and previous verification reports/20/) and information from sources other than those used, if available, and also conducts independent background investigations. Earthood conducted a desk review as under:

a) A review of the data and information presented to verify their completeness.
b) A review of the monitoring plan/01/, the monitoring methodology/07/ including applicable tool(s) and, where applicable, the applied standardized baseline, paying particular attention to the frequency of measurements, the quality of metering equipment including calibration requirements, and the quality assurance and quality control procedures.

c) An evaluation of data management and the quality assurance and quality control system in the context of their influence on the generation and reporting of emission reductions.

2.3 Interviews

Due to the current situation with the global COVID-19 pandemic scenario, an on-site inspection has not been performed by the assessment team. Although domestic travel has resumed in India, it is still not recommended until necessary and considering health and safety a top priority, physical site visit for verification audit is not conducted. Moreover, the VCS program does not explicitly mandate site visits as part of the validation and verification process during such unprecedented circumstances, only that VVBs must achieve a reasonable level of assurance on all validations and verifications (per section 4.1.2 of the VCS Standard, Version 4.2/11/). However, the representatives of the PP were interviewed during the virtual audit conducted on 15/03/2022 i.e., personnel responsible for monitoring of the project activity, data collection and management, and QA/QC procedure. The details of the people interviewed are mentioned in the table below:

Interviewee	Organization	Topic Covered	Team Member
Sanjeev Mittal	GE – Engg (Winsome Textiles Ltd)	Project implementation, start date as per the VCS requirements. Electricity Generation Records Reliability & accuracy of readings considered for emission reduction calculations, Calibration procedure. Consideration of monitoring period, monitoring methodology, project documentation and emission reduction calculations. Monitoring and measuring system, Collection of measurements Observations of established practices Data Verification of monitoring parameters. QA/QC procedures, data management, internal audits to	N. Premjit Singh Mihika Saxena Muskan Chawla
Dinkar Sharma	Sr. Manager of the plant		
Atul Singh	Managing Director (EcoCapita Consulting Pvt Ltd)		
Shwetangi Raj	Business Development Manager (EcoCapita Consulting Pvt Ltd)		

		maintain data quality & reliability, maintenance practices.	

2.4 Site Inspections

As discussed in the above section, physical site inspection is not done for the current verification. However, to achieve a reasonable level of assurance, the assessment team has followed the alternative means to substantiate the verification criteria as described in the below table:

Assessment Criteria	Means of verification/ Source Documents	Assessment Opinion
Description of project activity	Previous VCS verification and validation report /20/. Virtual interviews with site personnel and PP's representatives on 15/03/2022.	The information with reference to project capacity, technology, plant equipment's and commissioning dates as provided in section 1.1 of MR are found consistent with the documents and implementation on site.
Compliance of the project implementation with the registered project design document	Energy Meter Monthly Datasheets/17/ Geographical co-ordinates of project activity verified through Google Earth/14/ Previous VCS verification report /20/. Virtual interviews with site personnel and PPs representatives on 15/03/2022.	Energy meter monthly datasheets issued by DISCOMs indicate the following information: Identification of substation and grid connectivity to which the project is connected, capacity and name of the PP. Location of project is verified through Google Earth/14/ and found consistent with registered VCS PD/01/. All the information's regarding the project implementation as

		discussed above are further verified through VCS PD and Previous VCS verification and validation report and is found consistent in MR.
Compliance of the registered monitoring plan with applied methodologies and standardized baselines	Virtual interviews with site personnel and PPs representatives on 15/03/2022 Energy Meter Monthly Datasheets/17/ Logbook records for diesel consumption/06/ Previous VCS verification report /21/.	The organizational structure, responsibilities and competencies of the personnel confirmed through interview of the senior manager at the plant and PP's representative. Frequency of monitoring of parameters listed under approved monitoring plan is verified through energy meter monthly data sheets/17/. The methods used for measuring, recording, storing, aggregating, and reporting the data on monitored parameters are verified via virtual conversations with site personnel and records of monitoring and photographs of site equipment installed. Procedure for data uncertainty, emergency preparedness, roles and responsibility, operational and management structure are mentioned in the MR/02/ is confirmed through remote audit/08/ and found satisfactory.

Compliance with the calibration frequency requirements for measuring instruments	Calibration certificates of instruments used for monitoring/04/ Central Electricity Authority (Installation and Operation of Meters) Regulations/21/	Calibration frequency and energy meter specifications (Sr. No, make accuracy class) is verified through calibration certificates and found consistent. Monthly values of monitoring parameter used in ER calculation are verified through energy meter monthly data sheets/17/.
Assessment of data and calculation of emission reductions or net removals	Energy Meter Monthly Datasheets CEA CO2 Baseline Database for the Indian Power Sector/21/ Previous VCS verification report /21/. 2006 IPCC Guidelines for National Greenhouse Gas Inventories/22/	Monthly values of monitoring parameter used in ER calculation are verified through energy meter monthly data sheets/17/. Methods, formulae and emission factor for calculating baseline emissions have been followed are in accordance with the applied methodology and as described in the approved VCS verification report /20/.

It is noteworthy that no sampling plan for verification is applied as 100% data is verified for the current monitoring period. Most of the reference document referred by the assessment team (above table) are either issued by an external government agency or publicly available official data, hence is deemed authentic.

Based on the above assessment it can be concluded that the assessment team has verified sufficient appropriate audit evidence, to reduce audit risk to an acceptably low level as requisite to achieve reasonable level of assurance for the current verification.

2.5 Resolution of Findings

The objective of this step is to identify, discuss and conclude on the issues related to the monitoring, implementation and operations of the registered project activity that could impair the capacity of the registered project activity to achieve emission reductions or influence the monitoring and reporting of emission reductions. This is done based on the desk review and interaction with site personnel over phone. The verification team prepares and/or updates a verification protocol (internal document) that records the conformities and non-conformities, which may be of following types:

- CAR (Corrective Action Request) is raised if one of the following occurs:
  - Non-compliance with the monitoring plan, the methodology or the standardized baseline are found in monitoring and reporting and has not been sufficiently documented by the project proponent, or if the evidence provided to prove conformity is insufficient.
  - Modifications to the implementation, operation and monitoring of the registered project activity has not been sufficiently documented by the project proponent.
  - Mistakes have been made in applying assumptions, data or calculations of emission reductions that will impact the quantity of emission reductions.
- Issues identified in a FAR during validation to be verified during verification or previous verification(s) have not been resolved by the project proponent. Clarification request (CL) is raised if information is insufficient or not clear enough to determine whether the applicable CDM requirements have been met. All CARs and CLs raised by the ESPL during verification shall be resolved prior to submitting a request for issuance.
- FAR (Forward Action Request) is raised during verification if the monitoring and reporting require attention and/or adjustment for the next verification period. All the findings that are raised and communicated to project proponent during the verification are included under Appendix 2. The section also includes the response, if provided, by the project proponent and an assessment by the verification team if it was closed out or otherwise.

A total of 4 CLs were raised and successfully closed for this verification.

2.5.1 Forward Action Requests

The project activity is undergoing second periodic verification of the project activity under the first crediting period in VCS. No FARs are raised during the current monitoring period. There are also no open FARs raised during the previous verification report or validation report/20/ applicable for the current monitoring period.

Details for which can be checked from Appendix 2 of this verification report.

2.6 Eligibility for Validation Activities

This section is not applicable for the current verification.

3 VALIDATION FINDINGS

As project is already validated and this is the second verification of the project. Hence, this section is not applicable.

3.1 Participation under Other GHG Programs

The project activity is registered under VCS program only (VCS ID-1861).

The PP has submitted the declaration/13/ which states that the net GHG emission reductions generated by the project activity will not be used for compliance with any other emissions trading program or to meet binding limits on GHG emissions for the same monitoring period.

Hence, VVB confirms that PP is not participating in any other GHG mechanism during current monitoring period. Furthermore, VVB has checked the website of other programs like UNFCCC, VERRA & REC Registry of India and confirms that the project is not listed under any other registry.

3.2 Methodology Deviations

There is no methodology deviation identified during the current monitoring period.

3.3 Project Description Deviations

No project description deviation identified during the current monitoring period.

3.4 Grouped Project

Not applicable. The project activity is not a grouped project.

4 VERIFICATION FINDINGS

4.1 Project Implementation Status

3.5 MW Manuni Hydro Electric Project is a run-of-the-river small power project, where water from the river (Beas) is diverted through the powerhouse to generate renewable power. The small hydro power project has been constructed in the existing water bodies i.e., no water reservoir has been constructed for the project activity. The project was allotted to the M/s Winsome Textile Industries Ltd. on a Build, Own, Operate and Maintain (BOOM) basis for a period of 40 years.

The project site is located in the village of Khaniyara, Dharmashala, in Kangra district, of Himachal Pradesh. The nearest airport is 40 km away at Dharamshala. The project has an installed capacity of 3.5 MW (2 x 1.750 MW). Project proponent has signed Wheeling and Banking Agreement (PPA) with the Himachal Pradesh State Electricity Board (HPSEB), the generated electricity is being used for captive consumption at its manufacturing unit Baddi.

This is the second verification for the project activity. The project was commissioned at 31/03/2017. The project activity is operational since commissioning with planned outage and maintenance. The same has been checked and verified during the remote site visit/08/ for the project activity. The commissioning of both the turbines have been verified against previous verification and validation report/20/, where the commissioning details were checked through commissioning certificates/04/.

The project activity has injected 24,045 MWh electricity to grid during current monitoring period i.e., from 01/01/2020 to 31/12/2021 which has resulted in 22,246 tCO2e GHG emission reductions.

At the verification remote audit, it was concluded that the project is implemented as per the requirement of the registered PD. During the current monitoring period, it was observed that no unforeseen incident/event evolved which can impact the operation of the project activity. The project undergone continuous operation and only scheduled maintenance is observed as per the manufactures specification which is acceptable to the assessment team/08//01/.

Project location is confirmed by the assessment team during the remote audit. Assessment team also checked with the GPS coordinates, the latitude and longitude of the project site with validation report/20/ and confirm that the details as mentioned in the MR/02/ are inline with registered PD/01/. The details are as below:

District	State	Latitude	Longitude
Kangra	Himachal Pradesh	32˚ 11’ 30” N	76˚ 11’ 30” E

Assessment team also checked the technical details of the Pelton Turbines and Generator installed during remote audit/08/ and PD/01/ previous verification and validation report/20/.

The technical specifications of Turbine and Generator are given below:

Table 1: Technical Specifications of Turbine

Related Net Head	213 m
Design Flow	0.98 m^3/s
Related Power	1750 kW
Turbine Type	Double Jet, Horizontal Pelton Wheel
Number of Turbines	2

Table 2: Technical Specification of Generator

Capacity	2 x 1750 kW
Voltage Output	3300 V
Frequency	50 Hz
Configuration	Horizontal
Type	Synchronous SESR, Brushless

Since its commissioning, the project activity has been running constantly with planned outage and maintenance. During the present monitoring period i.e., 01/01/2020 to 31/12/2021 (Both days included), the project is in normal operation status; there have been no emergencies happened to the monitoring system. During the monitoring period, no events, or situations occurred that could affect the methodology's applicability.

The monitoring of the project activity is found to be in accordance with the monitoring methodology described in AMS I.D. version 18/07/. The monitoring mechanism is effective and reliable. During the remote audit, personnel involved at various levels of the operation of the project activity have been interviewed to confirm that the plant personnel are conscious of the importance of the monitoring activities. The remote audit of the plant records also substantiate consistency in recording and reporting of monitored data/08/.

Assessment team also verified through the remote site visit/08/ and the evidence provided by the PP/02/ that the project contributes to SDG 3 (Good Health and Well Being) with the project proponent making significant contributions of voluntary distribution of COVID-19 relief items like masks, sanitizers, medicines as well as essential food supplies through Panchayat Pradhan, Sub-District Magistrate (SDM) in the nearby areas to the project activity which lacked access to such basic services. Project Proponent has incurred expenditure cumulatively amounted to INR 74,781 and this intervention helped in preventing the spread of an infectious virus disease., SDG 7 (Affordable and Clean Energy with 53,322.7 MWh net electricity generation over its lifetime), and SDG-13 (Climate Action with achieved emission reduction of 49,141 tCO2e over its lifetime) during the monitoring period.

The assessment team confirmed that there is no proposed or actual change to the project design during this monitoring period. The project design as mentioned in the registered PD/01/ is implemented and thus the same is acceptable to the assessment team. All required monitoring equipment's and procedures as mentioned in the registered VCS PD/01/ are available and implemented in an appropriate manner/06//08/.

The organisational role and responsibility as mentioned in the registered PD/01/ is followed onsite. All the monitoring equipment was calibrated as per the specified interval in the registered PD. All the emergency preparedness as mentioned in the registered PD is followed onsite and no discrepancies were found regarding the same/08//01/.

The assessment team observed that the project is in line with the registered PD/01/, Validation report and previous verification report/20/ and approved methodology/07/ and thus no clarification/deviation is sought. 04 CLs were raised and were successfully closed during the verification process. Please refer Appendix 2 for the same.

Assessment team confirms following during the verification site visit conducted on 15/03/2022:

1. The start date of the project activity is 31/03/2017, which is also the date of commissioning of the turbines/09/.

2. Assessment team confirms that project has not received or sought any other form of environmental credit". An undertaking letter has been submitted by PP for double counting with any other GHG program. PP also has given a written declaration that project has not claimed other form of GHG credit for the concerned monitoring/13/.

Further, assessment team confirms that project activity provided contribution in sustainable development to the host country/01,08/.

3. Assessment team confirms that this is the first crediting period under VCS and covers the activity from 31/03/2017 to 30/03/2027 (inclusive of both dates). Thus, VCS crediting period should be maximum of 10 years. After 10 years, the crediting period will be renewed twice.

4. Assessment team checked and found that the Project proponent of the project activity is same as per the registered PD/01/. There is no change in details of the PP and the same is mentioned below:

Organization Name	Mr. Sanjeev Mittal
Contact Person	General Manager-Electrical & Electronics
Title	1, Industrial Area, Baddi, Himanchal Pradesh, India
Address	+91 78077 09812
Telephone	smittal@winsometextile.com
Email	Mr. Sanjeev Mittal

5. Assessment team also checked the details of other entity and found that the detail as mentioned in the MR/02/ is correct.

Organization Name	EcoCapita Consulting Private Limited
Contact Person	Consultant
Title	Mr. Sahil Wali
Address	VP
Telephone	Ultimate plaza 2, 24, Mandakini Colony, Kolar Road, Bhopal-462042/, Madhya Pradesh
Email	+91 6264902261

The quantified emission reduction calculation for the monitoring period is correct and conservative/02/. Assessment team also compared actual VER with the estimated VER and found that the emission reduction during current monitoring period is lower than ex-ante estimation in registered PD/01/ for current monitoring period (731 days) i.e., 35,238 tCO2e. The actual emission reduction achieved i.e., 22,246 tCO2e is 36.86% lower than ex-ante estimation for same period due to low PLF achieved/08/.

The project activity contributes to the sustainable development by generating employments, direct & indirect business opportunities and reducing the fossil fuel consumption & thus reducing GHG emissions/03/ as mentioned in section 1.11 of MR. The verification team has cross-checked with remote site assessment.

4.2 Safeguards

4.2.1 No Net Harm

VVB interviewed the PP during remote audit and PP confirmed that there is no negative impact to any socio-economic conditions of the region due to the project activity/08/. The facility is generating electricity from hydro energy for captive consumption. Hence, the project activity promotes environmental and socio-economic well-being as it results in zero GHG emissions due to installation and operation of clean, renewable energy technology for electricity generation/01//02/.

VVB verified the No-Objection Certificate for Consent to Establish from the concerned agencies and found it to be satisfactory/22/.

4.2.2 Local Stakeholder Consultation

The project activity is undergoing second verification and local stakeholder consultation was appropriately conducted prior to validation as a way to inform the design of the project and maximize participation from stakeholders during the validation.

The project proponent has also established a mechanism for continuous stakeholder interaction and considering the grievance from local stakeholders on ongoing basis. The details for the same are provided under section 2.2 of the MR and verified during interviews of remote audit and grievance register/18/ maintain at site.

4.3 AFOLU-Specific Safeguards

This is a non-AFOLU project, hence this section is not applicable.

4.4 Accuracy of GHG Emission Reduction and Removal Calculations

The calculation of the emission reductions is found to be correct. The details of the reported and the verified values for all parameters are listed in section 4.5 of this report.

The PP has provided the complete set of data for all the monitored parameters in the ER spreadsheet/03/. This data has been verified as described in section 4.5 below. The formulae & method used to calculate the baseline emissions, project emissions and leakage are appropriate and in line with the approved methodology AMS-I. D version 18.0.

The following parameters are monitored ex-ante:

S.No.	Parameter	Value	Assessment Team Remark

1.	$EF_{grid,OM,y}$	0.97839 tCO_2/MWh	Calculated in line with "Tool to calculate the emission factor for an electricity system (Version 07.0.0)" using data from Central Electricity Authority of India's (CEA) Database of India and validated in the registered PD/1/. The values are appropriately considered as per the registered PD. CEA's "Baseline Carbon Dioxide Emission Database", Version 13.0.
2.	$EF_{grid,BM,y}$	0.870 tCO_2/MWh	
3.	$EF_{grid,CM,y}$	0.9254 tCO_2/MWh	
4.	$NCV_{diesel,y}$	43.3 GJ/Ton	This value is used to calculate project emissions. It has been verified by the assessment team through the energy meter monthly datasheets/17/ that the fuel supplier does not provide emission factor in their invoices; neither are the regional / national default values available. Hence, IPCC default values at the upper limit of the uncertainty at a 95% confidence interval as provided in table 1.4 of Chapter1 of Vol. 2 (Energy) of the 2006 IPCC Guidelines on National GHG Inventories are taken. This is in line with the Methodological tool "Tool to calculate project or leakage emissions from fossil fuel combustion", version 3.0.
5.	$EF_{CO2,diesel,y}$	74.8 tCO_2/TJ	

As per CER excel spreadsheet/03/ submitted by the PP, the net emission reductions for the current monitoring period were verified as 22,246 tCO2e for the current monitoring period.

The assessment team able to confirm that the GHG emission reductions and removals have been quantified correctly in accordance with the project description/01/ and applied methodology/07/.

Emission Reduction Calculation:

Baseline Emissions

$BE_y = EG_{PJ,y} * EF_{CO2,\ grid,\ y}$

Where,

BE_y = Baseline emissions in year y (tCO_2)

$EG_{PJ,y}$ = Quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the CDM project activity in year y (MWh)

$EF_{CO2,grid,y}$ = Combined margin CO_2 emission factor for grid connected power generation in year y calculated using the latest version of the "Tool to calculate the emission factor for an electricity system" (tCO_2/MWh)

Now,

$EF_{CO2,grid,y}=EF_{CM,y}$ =0.9254 tCO_2e/MWh

For the year 2020,

$EG_{PJ,2020}$ = 13,364.39 MWh/year

Hence, BE_{2020} = 13364.39 X 0.9254 = 12367.54 tCO_2e

For the year 2021,

$EG_{PJ,2021}$ = 10,680.01 MWh/year

Hence, BE_{2021} = 10680.01 X 0.9254 = 9883.28 tCO_2e

Therefore, total baseline emissions for the current monitoring period i.e., 01/01/2020 to 31/12/2021 is 22,250 tCO_2e.

Project Emissions

The diesel consumption during current monitoring period was 1118.29 litres, which results around 3.04 tCO_{2e}, the project emissions during current monitoring period are calculated as per tool referred in registered PD/01/ using equation below:

$PE_{FC,j,y} = \Sigma FC_{i,j,y} * COEF_{i,y\ i}$

Where,

$PE_{FC,j,y}$ = Are the CO_2 emissions from fossil fuel combustion in process j during the year y (tCO_2/yr)

$FC_{i,j,y}$ = Is the quantity of fuel type I combusted in process j during the year y (mass or volume unit/yr)

$CO_{EFi,y}$ = Is the CO_2 emission coefficient of fuel type I in year y (tCO_2/mass or volume unit)

The CO_2 emission coefficient $COEF_{i,y}$ is calculated based on the net calorific value and CO_2 emission factor of fuel type i, as follows:

$COEF_{i,y} = NCV_{i,y} \times EF_{CO2,i,y}$

Now,

For the year 2020,

i. $NCV_{i,2020}$ = 43.3 GJ/Ton

$EF_{CO2,i,2020}$ = 74.8 tCO_2/TJ

Hence, $COEF_{i,2020}$ = 43.3 *74.8 /10^{-6} = 0.0032388 tCO_2/Kg

ii. $FC_{i,j,2020}$ = 185.36 Lit

$COEF_{i,2020}$ = 0.0032388 tCO_2/Kg

Hence, $PEFC_{,j,2020}$ = 185.36 *0.0032388 = 0.5042874 tCO_2 = 1 tCO_2 (rounded up)

For the year 2021,

i. $NCV_{i,2021}$ = 43.3 GJ/Ton

$EF_{CO2,i,2021}$ = 74.8 tCO_2/TJ

Hence, $COEF_{i,2021}$ = 43.3 X 74.8 /10^{-6} = 0.0032388 tCO_2/Kg

ii. $FC_{i,j,2021}$ = 932.93 Lit

$COEF_{i,2021}$ = 0.0032388 tCO_2/Kg

Hence, $PEFC_{,j,2021}$ = 932.93 X 0.0032388 = 2.53814935 tCO_2 = 3 tCO_2 (rounded up)

Therefore, total project emissions for the current monitoring period i.e., 01/01/2020 to 31/12/2021 is:

PE_y = 4 tCO_2e.

Leakage Emissions

In line with applied methodology, since the energy generating equipment is not transferred from another activity, leakage is not to be considered. Hence,

$LE_y = 0\ tCO_2e$

The Total Emission Reductions is given as:

$ER_y = BE_y – PE_y – LE_y$

$ER_y = 22,250 – 4 – 0$

$= 22,246\ tCO_2e$

As per ER Calculation Excel Spreadsheet/03/ submitted by the PP, the net emission reductions for the current monitoring period were verified as 22,246 tCO_2e for the current monitoring period.

The assessment team was able to confirm that the GHG emission reductions and removals have been quantified correctly in accordance with the project description /01/ and applied methodology/07/.

4.5 Quality of Evidence to Determine GHG Emission Reductions and Removals

The monitoring of the project activity is found to be in accordance with the monitoring methodology described in AMS-I.D, Version 18/07/. The monitoring mechanism is effective and reliable. During the remote audit/08/, personnel involved at various levels of the operation of the project activity have been interviewed to confirm that the plant personnel are conscious of the importance of the monitoring activities. The verification of the plant records/06/ and latest photographs/19/ are also substantiating consistency in recording and reporting of monitored data.

The meters comply with appropriate quality standards applicable for the used technology. The accuracy class of the meters installed for the project activity was verified through the registered VCS PD/01/, MR /02/, and calibration certificates/04/ are found to be consistent.

The supporting records of diesel consumption /06/ and generation data for the entire monitoring period were checked and found to be sufficient to enable verification of emission reductions/17//03/.

The following parameter has been verified for current monitoring period:

Parameter 1	Quantity of net electricity generation supplied by the project plant to the grid in year y ($EG_{PJ,y}$)
Means of verification	

Criteria / Requirements	Assessment / Observation
Measuring/Reading/Recording Frequency	Continuous monitoring, monthly recording
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology?	Yes, the reporting and measuring frequency is in line with the monitoring plan as outlined in the registered PD/1/ and monitoring methodology /7/.
Monitoring equipment	The net electricity supplied to the grid is calculated based on the electricity exported to the grid and imported from the grid. Energy meters of accuracy class 0.2s are used, (Calibration details of meter is provided separately in this section, under the heading “Calibration of meters”)
Is accuracy of the monitoring equipment as stated in the monitoring plan? If the monitoring plan does not specify the accuracy of the monitoring equipment, does the accuracy of the monitoring equipment comply with local/national standards, or as per the manufacturer’s specification?	Thus, calculated net electricity supplied to the grid is issued to the project proponent/investors in form of ABT Meter Reports by MRI forms for every month, which is the primary source of record. Monthly meter readings are taken from the main and check meter installed at metering point and certified by the representative of SEBI officials and the representative of the PP. This was verified during the remote site audit/8/, energy

		meter monthly data sheets/17/, and the latest photographs of energy meters installed at site/19/.
	Is the accuracy valid for the entire measuring range or do different accuracy levels apply to different measuring ranges?	Yes, the accuracy of the monitoring equipment used to measure the net values used to calculate $EG_{PJ,y}$ is 0.2s, which is as per the registered PD/01/ which is as per the norm defined in the DISCOM/CEA regulation/21/.
	Calibration frequency /interval	Calibration frequency for energy meters is once in five years.
	Is the calibration interval in line with the monitoring plan and/or methodology? If the monitoring plan does not specify the frequency of calibration, is the selected frequency in accordance with the local/national standards, pending untill the findings are closed or as per the manufacturer's specifications?	Yes, the calibration frequency is in line with the monitoring plan as outlines in the registered PD/1/.
	Is the calibration of measuring equipment carried out by an accredited person or institution?	Yes, the calibration is conducted by state utility which is an authorised government agency to conduct the same as per the calibration certificates/4/.
	Is(are) calibration(s) valid for the whole reporting period?	Yes, the calibration is valid for the entire monitoring period.

	How were the values in the monitoring report verified?	The values in the monitoring report were verified from the energy meter monthly data sheets/17/. Final value of electricity supplied to the grid by the project activity is verified as 24,045 MWh.
	If applicable, has the reported data been cross-checked with other available data?	Not applicable
	Does the data management ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes, the data ensures correct transfer of data and reporting of emission reductions management. QA/QC processes are in place.
	In case project proponents have temporarily not monitored the parameter, has either i) a deviation been approved by the CDM EB or ii) has the parameter been estimated as stipulated by Appendix 1 to the CDM Project Standard?	Not Applicable
Findings	CL#01 was raised and successfully resolved. Please refer to Appendix 2 for the detailed closure of the findings.	
Conclusion	The parameter has been monitored appropriately, in accordance with the registered monitoring plan (as per measurement methods and procedures to be applied) and applied methodology. The monitoring results were recorded consistently as per the approved frequency in the monitoring plan. The verification team is able to confirm that the project is implemented as per the registered PD/01/ and there is no discrepancy observed between the actual monitoring system and	

	the monitoring plan set out in the registered PD/01/ and the applied methodology/07/.
Parameter 2	Volume of diesel used in year y ($QC_{diesel,y}$)
Means of verification	The emission reduction calculation for the project activity is estimated based on the electricity supplied by the turbines. Since taken for emission reduction calculation are free from material errors.

Criteria / Requirements	Assessment / Observation
Measuring/Reading/Recording Frequency	Each filling and monthly aggregation
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology?	Yes, the reporting frequency is in line with the monitoring plan as outlines in the registered PD/1/ and monitoring methodology/7/.
Monitoring equipment	Fuel purchase receipts/23/
Is accuracy of the monitoring equipment as stated in the monitoring plan? If the monitoring plan does not specify the accuracy of the monitoring equipment, does the accuracy of the monitoring equipment comply with local/national standards, or as per the manufacturer's specification?	This is not applicable as the parameter is monitored by monitoring the volume of diesel used in year y, using the fuel purchase receipts/23/.
Is the accuracy valid for the entire measuring range or do different accuracy levels apply to different measuring ranges?	This is not applicable as the parameter is monitored by monitoring the volume of diesel used in year y, using the fuel purchase receipts/23/.
Calibration frequency /interval	Not applicable
Is the calibration interval in line with the monitoring plan and/or methodology? If the monitoring plan does not specify the frequency of	This is not applicable as the parameter is monitored by monitoring the volume of diesel used in year y, using

	calibration, is the selected frequency in accordance with the local/national standards, pending untill the findings are closed or as per the manufacturer's specifications?	the fuel purchase receipts/23/.
	Is the calibration of measuring equipment carried out by an accredited person or institution?	Not Applicable
	Is(are) calibration(s) valid for the whole reporting period?	Not Applicable
	How were the values in the monitoring report verified?	The values in the monitoring report were verified from monthly fuel purchase receipts/23/.
	If applicable, has the reported data been cross-checked with other available data?	Not applicable
	Does the data management ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes, the data ensures correct transfer of data and reporting emission reductions management. QA/QC processes are in place.
	In case project proponents have temporarily not monitored the parameter, has either i) a deviation been approved by the CDM EB or ii) has the parameter been estimated as stipulated by Appendix 1 to the CDM Project Standard?	Not applicable
Findings	CL#01 was raised and successfully resolved. Please refer to Appendix 2 for the detailed closure of the findings.	

Conclusion	The parameter has been monitored appropriately, in accordance with the registered monitoring plan (as per measurement methods and procedures to be applied) and applied methodology. The monitoring results were recorded consistently as per the approved frequency in the monitoring plan. The verification team is able to confirm that the project is implemented as per the registered PD/01/ and there is no discrepancy observed between the actual monitoring system and the monitoring plan set out in the registered PD/01/ and the applied methodology/07/. The emission reduction calculation for the project activity is estimated based on the electricity supplied by the turbines. Since 100% data was verified, the team can ascertain that the values taken for emission reduction calculation are free from material errors.

Calibration of meters:

During the verification assessment of the project activity, accuracy of all the metering have been checked and found appropriate.

The installation and working conditions of the meters were checked through calibration certificates/04/, latest photographs/19/ and were found to be satisfactory.

Details of the meters are provided in the below table:

- Previous Meter – ABT Meter

Parameter	Main Meter	Check Meter
Make	Secure	Secure
Type	3 phase 4W	3 phase 4W
Serial No	HPU06489	HPU06490
Accuracy Class	0.2s	0.2s
Date of Calibration	23/12/2017	23/12/2017
Validity	5 years	5 years

- The above meters being replaced dated 23/06/2021 by new ABT meters as per details below:

Parameter	Main Meter	Check Meter
Make	Secure	Secure
Type	3 phase 4W	3 phase 4W
Serial No	Q0333406	Q0333342
Accuracy Class	0.2s	0.2s
Date of Calibration	24/11/2020	23/11/2020
Validity	5 years	5 years

It is evident from the above table that calibration of all the existing meters was valid during the current monitoring period, hence no delay in calibration of meters identified. The CEA Notification No. 502/70/CEA/DP&D dated 17/03/2006 and its amendments Notified on 26/06/2010 No. 502/6/2009/DP&D/D-I /21/ which is considered as national standard, mentions that for voltage of 650 V up to 33 kV, 0.5s accuracy class or above is recommended. Hence, the accuracy classes of 0.2s for the energy meters installed at the project activity site are found to be appropriate.

The details of monitoring equipment are involved in the project activity and their calibration details/04/ are mentioned in section 4.2 of the VCS MR/02/. The CEA Notification No. 502/70/CEA/DP&D dated 17/03/2006[/21/] which is considered as national standard mentions that "All interface meters shall be tested at least once in five years." Hence, the stipulated calibration frequency 'once in five years' is appropriate.

In view of the above discussion the assessment team able to confirm that evidence used to determine the GHG reductions and removals are sufficient and appropriate with respect to quality and quantity.

4.6 Non-Permanence Risk Analysis

This project is not AFOLU project. Hence, this section is not applicable for the project activity.

5 VERIFICATION CONCLUSION

Earthood Services Private Limited (ESPL), contracted by EcoCapita Consulting Private Limited, to perform the independent second verification of the emission reductions for the VCS project activity reference number 1861 "3.5 MW Manuni Hydro Electric Project in Himanchal Pradesh by Winsome Textile Industries Ltd" in India for the monitoring period 01/01/2020 to 31/12/2021 (inclusive of both dates) reported in Monitoring Report version 02 dated 15/04/2022.

It is our responsibility to express an independent verification statement on the reported GHG emission reductions from the project activity. ESPL commenced the verification on the basis of the baseline and monitoring methodology "AMS-I.D, Version 18.0", the monitoring plan contained in the registration VCS PD/01/ and VCS guidelines version 4.1/12/, Monitoring Report Version 02 dated 15/04/2022 as per the process described under Section 2.0 of this report.

ESPL's verification approach is based on the understanding of the risks associated with reporting of GHG emission data and the controls in place to mitigate these. ESPL planned and performed the verification by obtaining evidence and other information and explanations that ESPL considered necessary to give reasonable assurance that reported GHG emission reductions are fairly stated.

In our opinion the GHG emissions reductions reported for the project activity for the period 01/01/2020 to 31/12/2021 (inclusive both days) are fairly stated in the Monitoring Report Version 02 dated 15/04/2022. The GHG emission reductions were calculated correctly on the basis of approved baseline and monitoring methodology "AMS-I.D, Version 18.0" and the VCS Standard Version 4.2/11/.

The annual estimated emission reduction for this monitoring period is 35,238 tCO2e. Whereas the actual emission reduction for this monitoring period is 22,246 tCO2e. There was a decrease in generation as compared to the projected generation due to a low PLF achieved, which has led to 36.86% lower ERs as compared to the estimated value.

Verification period: From 01/01/2020 to 31/12/2021 (inclusive both days)

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

Year	Baseline emissions or removals (tCO_2e)	Project emissions or removals (tCO_2e)	Leakage emissions (tCO_2e)	Net GHG emission reductions or removals (tCO_2e)
2020	12367	1	0	12366
2021	9883	3	0	9880
Total	22250	4	0	22246

Approved by



Dr. Kaviraj Singh

Managing Director **Date: 16/08/2022**

Earthood Services Privated Limited **Place: Gurgaon, Haryana**

APPENDIX 1: DOCUMENT REFERENCES

S.No	Title of Document	Version	Date
1.	Registered PD	03	25/03/2019
2.	VCS Monitoring Report (01/01/2020 to 31/12/2021)	03	06/08/2022
3.	ER spread sheet (01/01/2020 to 31/12/2021)	02	15/04/2022
4.	Certificates of Calibration for all energy meters	-	-
5.	MNRE Report on “Developmental Impacts and Sustainable Governance Aspects of Renewable Energy Projects”	-	01/09/2013
6.	Plant Records/Logbooks/DGS record for the duration of monitoring period (01/01/2020 to 31/12/2021)	-	-
7.	Approved Consolidated Methodology AMS I.D: Grid Connected Renewable Electricity Generation	18	-
8.	Remote Audit through Skype video call/Telephonic discussions	-	15/03/2022
9.	Commissioning certificate	-	-
10.	VCS webpage for the project, https://registry.verra.org/app/projectDetail/VCS/1861	-	Last accessed on 26/04/2022
11.	VCS Standard	4.2	Last accessed on 26/04/2022
12.	VCS Program Guide	4.1	Last accessed on 26/04/2022
13.	Letter of declaration dated from PP regarding not having created or sought any other form of environmental credit for the same period and double counting	-	-
14.	Google Earth desktop/Mobile application	-	Last accessed on 26/04/2022
15.	Technical Specifications by technology supplier	-	-
16.	Skill development training records	-	-
17.	Energy Meter Monthly Data Sheets	-	-
18.	Copy of grievance register/suggestion box placed at site office	-	-
19.	Latest photographs of energy meters installed at site	-	-
20.	Validation Report	02	26/03/2019
	Previous Verification Report	01	06/03/2020
21	Central Electricity Authority (Installation and Operation of Meters) Regulations	13	-
	CEA Database: CO_2 Baseline Database for Indian Power sector		
22	No-Objection Certificate for Consent to Establish	-	14/03/2017
23	Fuel purchase receipts	-	-

APPENDIX 2: FINDINGS OVERVIEW

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

FAR ID	NA	**Section no.**	NA	**Date :**DD/MM/YYYY
Description of FAR				
No FAR from validation or verification				
				Date :DD/MM/YYYY
NA				
Documentation provided by project proponent				
NA				
VVB assessment				**Date:** DD/MM/YYYY
NA				

Table 1. CL from this verification

CL ID	01	**Section no.**	NA	**Date : 11/03/2022**
Description of CL				
The PP is requested to provide the following documents: 1. ER Sheet 2. Invoice Details				
Project proponent response				**Date :** 15/04/2022
1. ER Sheet - **Attached** **2.** Invoice Details – **Not Applicable as the generated electricity is for captive use, but not for sale**				
Documentation provided by project proponent				
1. ER sheet				
VVB assessment				**Date:** 02/05/2022
1. PP has submitted the ER Sheet for Electricity Generation data which is ok. 2. As the generated electricity is for captive use, the invoices are not required which is found to be satisfactory. Thus, CL01 is closed.				

Table 2. CL from this verification

CL ID	02	**Section no.**	1.11 of MR	**Date : 11/03/2022**
Description of CL				
PP is required to submit a minimum of 3 SDG Goals as per the VCS Standard Guidelines.				
Project proponent response				**Date :** 15/04/2022
The SDG goals is updated in the revised Monitoring report				
Documentation provided by project proponent				
1. Updated MR version 02				
VVB assessment				**Date:** 02/05/2022
The revised MR is checked and found that section 1.11 of MR is updated. Thus, CL03 is closed.				

Table 2. CL from this verification

CL ID	03	**Section no.**	2.1 of MR	**Date : 11/03/2022**
Description of CL				
PP is requested to submit the following documents: 1. No-Objection Certificate for Consent. 2. Contact details of the site in-charge				
Project proponent response				**Date :** 15/04/2022

1. Consent to Establish and Consent to operate from Himachal Pradesh pollution control board is attached for your reference 2. Below is the contact details of Site In-charge: a. Mr. Dinkar Sharma Site Incharge Mobile - +91 9418028296
Documentation provided by project proponent
1. Consent to Establish **2.** Consent to operate
VVB assessment **Date:** 02/05/2022
1. The information provided by the PP regarding No Objection Certificate for Consent to Establish and Consent to Operate certificates are found to be satisfactory. 2. The information regarding the details of the site incharge is correct. Thus, CL03 is closed.

Table 3. CL from this verification

CL ID	04	**Section no.**	3.1	**Date : 11/03/2022**
Description of CL				
The monitoring report states that there were no major shutdowns during the current monitoring period. The PP is required to clarify the same.				
Project proponent response				**Date :** 15/04/2022
We would like to further clarify that there has been no major shutdown on account of technical faults. However, shut down has been happened due to its dependency on rivers natural **run**-off				
Documentation provided by project proponent				
NA				
VVB assessment				**Date:** 02/05/2022
The information provided by PP regarding the shutdown is found to be satisfactory, hence accepted. Thus, CL04 closed.				

CAR from this verification

CAR ID	00	**Section no.**		**Date : DD/MM/YYYY**
Description of CAR				
No CAR from this validation or verification				
Project proponent response				**Date :**
Documentation provided by project proponent				
VVB assessment				**Date:**

FAR ID	NA	**Section no.**	NA	**Date :**DD/MM/YYYY
Description of FAR				
No FAR from verification				
				Date :DD/MM/YYYY
NA				
Documentation provided by project proponent				
NA				
VVB assessment				**Date:** DD/MM/YYYY
NA				

APPENDIX 3: ABBREVIATIONS

Abbreviations	Full texts
ABT	Availability Based Tariff
BEF	Baseline Emission Factor
BM	Build Margin
CAR	Corrective Action Request
CEA	Central Electricity Authority
CERC	Central Electricity Regulatory Commission
CL	Clarification Request
CMS	Central Monitoring System
CMP	Conference of Parties Serving as Meeting of Parties
CO_2	Carbon dioxide
DISCOM	Distribution Company
EB	Executive Board
FAR	Forward Action Request
GHG	Green House Gas
ISO	International Standards Organization
JMR	Joint Meter Reading
Kw	Kilowatt
kWh	Kilowatt hour
MFR	Multi-Function Relay
MR	Monitoring Report
MWh	Megawatt-hour
PD	Project Description
PLF	Plant Load Factor
PP	Project Proponent
QA/QC	Quality Assurance and Quality Control
APEPDCL	Eastern Power Distribution Company of AP Limited
UNFCCC	United Nations Framework Convention on Climate Change
VCS	Voluntary Carbon Standard
VCSA	Voluntary Carbon Standard Association
VCS PD	VCS Project Description
VCUs	Voluntary Carbon Units

APPENDIX 4: COMPETENCY STATEMENTS

Competence Statement			
Name	N Premjit Singh		
Education	B.Tech in Mechanical Engineering M.Tech in Energy Technology		
Experience	9+ Years		
Field	Climate Change, Energy		
Approved Roles			
Team Leader	YES		
Validator	YES		
Verifier	YES		
Methodology Expert	AMS I.D		
Local expert	YES		
Financial Expert	NO		
Technical Reviewer	NO		
TA Expert (X.X)	YES (TA 1.2)		
Reviewed by	Deepika Mahala (Quality Manager)	Date	19/08/2021
Approved by	Ashok Gautam (Technical Manager)	Date	25/08/2021

Competence Statement			
Name	Harsh Raval		
Education	Bachelor of Engineering in Chemical Engineering Master of Science in Environmental and Energy Engineering		
Experience	15 Years		
Field	Climate Change, Environment and Waste Management		
Approved Roles			
Team Leader	YES		
Validator	YES		
Verifier	YES		
Methodology Expert	YES (AMS-I.D, ACM0002)		
Local expert	YES (INDIA)		
Financial Expert	NO		
Technical Reviewer	YES		
TA Expert (1.2)	YES		
Reviewed by	Deepika Mahala (Quality Manager)	Date	08/12/2021
Approved by	Ashok Gautam (Technical Manager)	Date	08/12/2021

Competence Statement

Name	Mihika Saxena		
Education	B. Tech Civil Engineering		
Experience	NA		
Field	Environmental Engineering		
Approved Roles			
Team Leader	NO		
Validator	NO		
Verifier	NO		
Methodology Expert	NO		
Local expert	NO		
Financial Expert	NO		
Technical Reviewer	NO		
TA Expert (X.X)	NO		
Trainee	YES		
Reviewed by	Deepika Mahala	Date	09/03/2022
Approved by	Ashok Gautam	Date	09/03/2022

Competence Statement			
Name	Muskan Chawla		
Education	M.Sc. Environment Science		
Experience	NA		
Field	Environment Science		
Approved Roles			
Team Leader	NO		
Validator	NO		
Verifier	NO		
Methodology Expert	NO		
Local expert	NO		
Financial Expert	NO		
Technical Reviewer	NO		
TA Expert (X.X)	NO		
Trainee	YES		
Reviewed by	Deepika Mahala	Date	09/03/2022
Approved by	Ashok Gautam	Date	09/03/2022