



**UCR PROJECT  
VERIFICATION REPORT 2023**

**GCEES**



## Project Verification Report Form (VR)


### CARBON OFFSET UNIT (CoU) PROJECT

## Verification Report (VR)

### Basic Information

<b>Name of approved UCR Project Verifier/Reference No.</b>	Green Carbon Energy & Environment Services (GCEES)
<b>Validity of UCR approval of Verifier</b>	Valid
<b>Completion Date of this VR</b>	05/10/2023
<b>UCR Project Registration Code</b>	UCR-315
<b>Approved UCR Scopes and GHG Sectoral scopes for Project Verification</b>	04: Manufacturing industries
<b>Host Country where project is located</b>	India
<b>Title of the project activity</b>	Emission Reduction in Aluminium Recycling process by CMR Group.
<b>Name of Entity requesting verification service</b> (can be Project Owners themselves or any Entity having authorization of Project Owners, example aggregator.)	CMR Green Technologies Limited
<b>Contact details of the representative of the Entity, requesting verification service (Focal Point assigned for all communications)</b>	Corp. Office: 803, SSR Corporate Park, Opp NHPC Metro Station, Delhi Mathura Road, Faridabad- 121003, Haryana. India.
<b>Applied methodologies (approved methodologies by UCR Standard used)</b>	AMS III BD – Version 01 GHG emission reduction due to supply of molten metal instead of ingots for Aluminium Castings.  Standardized Methodology: Not Applicable.
<b>GHG Sectoral scopes linked to the applied methodologies</b>	<b>SCOPE:</b> 04: Manufacturing industries.
<b>Project Verification Criteria: Mandatory requirements to be assessed</b>	<ul style="list-style-type: none"> <li>UCR Standard</li> </ul>

	<ul style="list-style-type: none"> <li>• Applicable Approved Methodology</li> <li>• Applicable Legal requirements /rules of host country</li> <li>• Eligibility of the Project Type Start date of the Project activity</li> <li>• Meet applicability conditions in the applied methodology</li> <li>• Credible Baseline</li> <li>• Emission Reduction calculations</li> <li>• Monitoring Report</li> <li>• No GHG Double Counting</li> </ul>
<p><b>Project Verifier's Confirmation: The UCR Project Verifier has verified the UCR project activity and therefore confirms the following:</b></p>	<ul style="list-style-type: none"> <li>• The UCR Project Verifier [Vivek Ahirwar, C/o Green Carbon Energy &amp; Environment Services], certifies the following with respect to the UCR Project Activity [Emission Reduction in Aluminium Recycling process by CMR Group.].</li> <li>• The Project Owner has correctly described the Project Activity in the Project Concept Note (version 01, dated 15/03/2023) including the applicability of the approved methodology [AMS-III BD- Version 01 GHG emission reduction due to supply of molten metal instead of ingots for Aluminium Castings.] and meets the methodology applicability conditions and has achieved the estimated GHG emission reductions, complies with the monitoring methodology and has calculated emission reductions estimates correctly and conservatively.</li> <li>• The Project Activity was assumed to generate GHG emission reductions amounting to the estimated is 16,780 tCO<sub>2</sub>e per annum, as indicated in the PCN, which are additional to the reductions that are likely to occur in absence of the Project Activity and complies with all applicable UCR rules. However, actual verification resulted into 22,329 tCO<sub>2</sub>e of annual avg. CoUs across all the plants.</li> <li>• The Project Activity is not likely to cause any net-harm to the environment and/or society. During the current verification period a total of <b>223,289 CoUs</b> achieved.</li> </ul>

	<p>➤ The Project Activity complies with all the applicable UCR rules and therefore recommends UCR Program to register the Project activity with above mentioned labels.</p>
<b>Project Verification Report, reference number and date of approval</b>	<p>Verification Report Reference: GCEES/VR/UCR-315</p> <p>Approved on: 05/10/2023</p> <p>Total CoUs approved: 223,289 tCO<sub>2</sub>eq</p>
<b>Name of the authorised personnel of UCR Project Verifier and his/her signature with date</b>	<p><b>Name: Vivek Kumar Ahirwar</b> <b>Date: 05/10/2023</b></p>
<b>Signature:</b>	

### Additional Reference:

<b>Proof of Contracting for UCR Verification</b>	<b>Reference</b>
Service Contract with CMR Green Technologies Limited	Agreement dated 03/05/2023
UCR Program Verification – No Double Accounting Assurance Statement	Statement signed, dated 19/07/2023
UCR Program Verification - No Conflict-of-Interest Statement	Statement signed, dated 28/09/2023

## SECTION A. PROJECT VERIFICATION REPORT

### A.1. Executive summary:

Green Carbon Energy & Environment Services (GCEES), an approved URC Auditor represented by Vivek Kumar Ahirwar, has been appointed by “CMR Green Technologies Limited” to perform an independent UCR verification of its project, “Emission Reduction in Aluminium Recycling process by CMR Group” UCR ref. no. 315 for the reported GHG emission reductions for the given monitoring period from 01/01/2013 to 31/12/2022 (both dates included). As per UCR Standard, a UCR project must undergo independent third-party verification and certification of emission reductions as the basis for issuance of ‘Carbon Offset Units’ (CoU).

The objectives of this verification exercise are to establish that:

- project activity has been implemented and operated as per the registered PCN/ and that all physical features (technology, project equipment, and monitoring and metering equipment) of the project are in place;
- Monitoring report and other supporting documents are complete;
- The actual monitoring systems & procedures and monitoring report conforms with the requirements of the approved monitoring plan and the approved monitoring methodology;
- The data is recorded and stored as per the monitoring methodology and approved monitoring plan.

### A.2. Scope:

The scope of the verification is the independent and objective review and ex-post determination of the monitored reductions in GHG emission by the project activity. The verification is based on review of monitoring report, supporting information.

- (a) The registered PCN, including the monitoring plan and the corresponding validation opinion(s);
- (b) Monitoring report for the monitoring period under verification including CoU calculations sheets and all supporting documents;
- (c) The applied monitoring methodology
- (d) Relevant decisions, clarifications and guidance from the UCR;
- (e) All information and references relevant to the project activity, resulting in emission reductions;
- (f) The project is assessed against the requirements of the UCR.

Based on the recommendations in the latest version of UCR requirements for project activity, the Verifier has considered a rule-based approach in the verification, focusing on the identification of significant reporting risks and the reliability of project monitoring.

### A.3. Description of project:

The project titled as “**Emission Reduction in Aluminium Recycling process by CMR Group**” is a grouped project activity with four aluminium recycling units of CMR Group located in Haridwar (Uttarakhand), Bawal, Gurugram & Manesar (Haryana) in India.

The project activity has achieved total GHG emission reduction of **2,23,289 tCO<sub>2</sub>e** for overall period of 10 years, 00 months starting from 01/01/2013 to 31/12/2022 (both days included) during this first monitoring and verification cycle. The project activity involves supply of molten Aluminium and utilization in die-casting operation directly. Therefore, the project activity reduces the dependence on fossil fuel and avoid associated aluminium metal loss due to oxidation during re-melting of ingots; thereby, effecting an overall reduction in GHG emissions. So, it will not cause any negative impact on the environment and thereby contributes to climate change mitigation efforts. The baseline is well established and reported in the project.

The earliest date of commissioning of the units was on 22<sup>nd</sup> August 2008 which is for Haridwar plant and the latest commissioning was for Bawal plant which was 02<sup>nd</sup> Dec 2013. All units have been in continuous operation since its commissioning. Therefore, the consideration of crediting period for the project is justified as 01 Jan 2013. Commissioning certificate verified by the verification team to confirm the date of commissioning. The project was found implemented and operated in line with the information provided in the PCN.

The project activity is promoted by “CMR Green Technologies Limited” (hereinafter also referred to as (i) project proponent or PP and (ii) CMR Group), is a manufacturer of Aluminium and Zinc based alloys. CMR Group has pride of being the biggest producer for these alloys in India.

The verification team has verified the status of commissioning of the four unit included under the UCR project and found accurate as per record, as follows:

Unit Reference	Location Reference	Commissioning Date	Remarks
Unit 1	Haridwar (Uttarakhand)	22 Aug 2008	Represented under “CMR Green Technologies Limited”
Unit 2	Gurugram (Haryana)	30 Dec 2009	Represented under “CMR Green Technologies Limited”
Unit 3	Manesar (Haryana)	01 Aug 2013	Represented under “CMR Green Technologies Limited”
Unit 4	Bawal (Haryana)	02 Dec 2013	Represented under “CMR Nikkei India Pvt. Ltd.” . Ltd.”

Thus, the eligibility of the project under UCR in terms of project commissioning date is justified.

## SECTION B. Project Verification team, technical reviewer and approver

### B.1. Project Verification team:

SN	Role	Last Name	First Name	Affiliation	Involvement
1	Lead Auditor	Ahirwar	Vivek	UCR (Representing GCEES, approved by UCR as Verifier)	Document Review Desk Review Remote Assessment UCR documentation
2	Technical Reviewer	Soni	Ravikant	GCEES (Appointed as a technical reviewer of the UCR verification)	Technical Review

## SECTION C. Means of Project Verification

### C.1. Desk/document review:

In order to present an ex-ante estimated value in this Project Concept Note for all future reference, a detailed calculation has been done. Based on the primary data collected during the project design and based on all methodological parameters, the estimated emission reductions are about 16,780 tCO<sub>2e</sub> per annum, whereas actual emission reductions accounted during the first CoU period has been submitted as a part of first monitoring and verification. This period was considered for 01/01/2013 to 31/12/2022 which led to an annual avg. CoUs of 22,329.

The assessment team has verified that the earliest date of commissioning of the units was on 22<sup>nd</sup> August 2008 which is for Haridwar plant and the latest commissioning was for Bawal plant which was 02<sup>nd</sup> Dec 2013. All units have been in continuous operation since its commissioning. Therefore, the consideration of crediting period for the project is justified as 01 Jan 2013 and is in line with UCR Requirements.

Through document review in conjunction with the interview with the plant personnel, the verification team confirms that all physical features of the project activity including technology, data collection systems and storage systems have been implemented in accordance with the Project PCN.

The monitoring plan required equipment(s) are available at the plant (such as weigh bridge, fuel consumptions, fork lift operations, time requirement, temperature, efficiency data etc.), however most of the calculation parameters are considered under “default value” choice; hence overall estimation was found justified and also monitoring of all the required parameters are properly addressed.

The manager of the recycling unit will be responsible to prepare the daily, monthly and annual reports. These reports are reviewed by the plant head. Quarterly this data will also be reviewed by the plant management and further reviewed by responsible or authorized official at CMR group. Since the emissions reductions mainly depend on the amount of molten metal supplied, the measuring or weighing scale becomes an important monitoring equipment. This equipment are generally calibrated as per manufacturer’s prescription or at least once in five years. Moreover, the data related to ex-post monitoring parameters are mainly sourced from authentic official records, further verified and certified by the CMR group, hence considered as self-declared official data. All the monitored data and related documentation shall be archived and stored (electronically & hard copies) till two years beyond the crediting period.

The energy meters were found to be installed at the respective places as observed through captured photographs by the verification team and through the live video during the remote assessment.

The project activity of the CMR four units result in reduction of anthropogenic emissions of GHG by sources below those that would have occurred in the absence of the project activity under UCR. The project units aim to achieve fuel and metal saving at casting units by supplying molten Aluminium in place of solid ingots. Supply of molten Aluminium to the casting unit is less GHG emission intensive technology, whereas, supply of solid ingots is more GHG intensive technology.

There are no any National and/or Sectoral policies or Regulations that give comparative advantages to supply of solid ingots to casting units over supply of molten Aluminium to the



casting units. Also, there is no National and/or sectoral policy or regulation that give comparative advantages to supply of molten Aluminium to the casting units over supply of solid ingots to casting units which is a more emissions-intensive technology.

Hence, the proposed project activity is voluntary in nature. The E+ and E- policies in accordance with “Clarifications on the Consideration of National and/or Sectoral Policies and Circumstances in Baseline Scenarios” published in CDM EB22/Annex 3 with regards to the local, national and sectoral policies have been taken into account while developing the baseline scenario.

Post implementation of the project activity the project proponent would directly supply molten Aluminium/Aluminium alloy, thereby eliminating **the use of fossil fuel at casting units** for melting of Aluminium ingots procured in the pre-project scenario and **avoiding the metal loss** that would have happened due to oxidation. In absence of the project scenario, proponent (PP) would continue the supply of Aluminium metal to the casting units in the form of solid ingots from its existing facility.

The project boundaries and all key equipment are in line with the registered PCN. The verification team confirmed during the remote auditing (video conferencing) that the UCR project is completely operational and the name plate details of all key equipment are in line to the registered PCN.

The details of operation of the project activity were cross checked through interviews and found consistent. No major breakdowns, except the regular shutdown period during the operation & maintenance, have been observed during the monitoring period which has not affected the applicability of the applied methodology as reported in the MR. However, during the initial years (2013-15) the primary data specific to project emission calculations were not made available, however most conservative default value consideration was made which is accepted.

The allocation of the responsibilities is followed as described in the registered PCN. Routines for the data archiving are defined and documented. Calculations laid down in the monitoring report are in line with registered PCN.

Interviews were carried out with the project site personals and project managers during the audit to verify the actual monitoring system practiced by PO. It was found that the project personals are well aware of their roles & responsibilities, regularly trained as well.

The actual monitoring system practiced for the monitoring period is in line with the monitoring plan provided in the registered PCN. More details are provided in sections below.

The actual emission reductions achieved are **2,23,289 tCO<sub>2</sub>e (i.e., 2,23,289 CoUs)** for the current monitoring period. This value is derived most conservative manner by rounding down all monthly and yearly values of ER.

## C.2. Off-site inspection:

Date:	Activity Performed	Means of communication	Outcome
21/06/2023	Document Review & Interviews with the Plant technical teams, project managers, consultants and corporate team representatives	Online via Zoom Meeting Call	Satisfactory and acceptable
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## C.3. Interviews:

SN	Interviews			Date	Subject
	Last Name	First Name	Affiliation		
1	Rana	S. S.	Chief Operating Officer, CMR Group.  Represented the 4 units included under the project activities	21/06/2023	Project Implementation, Monitoring procedure, Data management practices, training etc.
2	Bagla	Ridheema	Official from CMR group.  Project Coordination and communication	21/06/2023	Project specific communications, coordination, etc.
3	NA (Team)	NA (Team)	Carbon Consulting Team of Client.  Overall communication and carbon project management	21/06/2023, 22/06/2023, 19/07/2023, 25/07/2023, 27/09/2023	Overall UCR Requirements, documentations, baseline, ER calculations, Monitoring, reporting etc.

#### **C.4. Sampling approach:**

No sampling has been undertaken; full data set reviewed to arrive on a reasonable level of assurance.

#### **C.5. Clarification request (CLs), corrective action request (CARs) and forward action request (FARs) raised:**

The verification team has observed some points where clarification and corrective actions were required to finalize the verification assessment. These were responded by PP and found satisfactory. Please refer to the Appendix D of this report for more details.

## SECTION D. Project Verification findings

### D.1. Identification and eligibility of project type:

<b>Means of Project Verification</b>	Verifier checked the monitoring report with “UCR Program Verification Standard”, version 02. The information in the registered PCN has been referred during verification. The verification of the current monitoring period is found to have met all the requirements.
<b>Findings</b>	Nil.
<b>Conclusion</b>	The project is renewable energy project and already registered with UCR, the eligibility requirements of UCR met for the project type.

### D.2. General Description of project activity:

<b>Means of Project Verification</b>	<p>Verifier checked the monitoring report against the project description submitted under the registered UCR PCN.</p> <p>Also, while verifying “UCR Program Verification Standard”, version 02 has been referred, the verification of the current monitoring period is found to have met all the requirements.</p> <p>Through document review in conjunction with the interview with the Project Representatives and UCR consulting team, the verification team confirms that all physical features of the project activity including technology, data collection systems and monitoring systems etc. have been implemented in accordance with the project PCN.</p>
<b>Findings</b>	Corrective action requests were raised during the verification assessment related to the consistency in ER values and PP has responded satisfactorily and hence there is no open finding.
<b>Conclusion</b>	<p>According to UCR Program Verification Standard, version 02, the verifier confirms that:</p> <ul style="list-style-type: none"> <li>(a) The project activity is implemented as per the registered PCN, the project activity (all the plants) was fully commissioned and operational at the time of verification.</li> <li>(b) The actual operation of the UCR project activity is in line to the registered PCN, All baseline data and emission factors are reasonably applied.</li> <li>(c) The actual emission reduction is reasonable (marginally higher) while comparing with the expected emission</li> </ul>

	<p>reductions reported in the PCN for the current monitoring period. This increase in CoUs does not have any material impacts as results are correlated to the production data, which are based on primary records.</p> <p>(d) The ER values are verifiable from the monthly data and official declarations etc. Also, the measuring equipment and test certificates are reasonably addressed during the remote audit to ensure all monitoring requirements of the project activity.</p> <p>(e) Verifier has reviewed the registered PCN including the monitoring plan, the applied monitoring methodology, also the CDM registered PDD of a reference project of the PP and monitoring reports, relevant decisions from UCR.</p>
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## Application and selection of methodologies and standardized baselines:

### a. Application of methodology and standardized baselines:

<b>Means of Project Verification</b>	<p>The verifier was able to confirm that the monitoring plan contained in registered PCN and MR is in accordance with the approved methodology applied for the project activity i.e., AMS III BD – Version 01</p> <p>GHG emission reduction due to supply of molten metal instead of ingots for Aluminium Castings. Under the project level, the main activity that forms the carbon project is primarily saving the fuel and metal in the production process through modification of the conventional existing process in the industry.</p> <p>In the baseline scenario, the solid ingots were re-melted at the casting units for utilization in casting operations. For casting operations casting units melt solid ingots in their in-plant FO fired furnaces and use the molten Aluminium for castings. The use of fossil fuel for melting of the ingots leads to emissions of GHG. The process of melting of the ingots also leads to loss of some quantity of metal due to oxidation of the molten metal.</p>
<b>Findings</b>	Nil
<b>Conclusion</b>	MR complies with the monitoring requirement of the applied approved methodology AMS III BD – Version 01 GHG emission reduction due to supply of molten metal instead of ingots for Aluminium Castings in the context of the project activity.

**b. Clarification on applicability of methodology, tool and/or standardized baseline:**

<b>Means of Project Verification</b>	N/A
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**c. Project boundary, sources and GHGs:**

<b>Means of Project Verification</b>	Project boundary is in line with the applied methodology, and the sources of GHGs etc.
<b>Findings</b>	Nil
<b>Conclusion</b>	Project boundary is in line with the applied methodology.

**d. Baseline scenario:**

<b>Means of Project Verification</b>	The project activity is promoted by “CMR Green Technologies Limited” (hereinafter also referred to as (i) project proponent or PP and (ii) CMR Group), is a manufacturer of Aluminium and Zinc based alloys. CMR Group has pride of being the biggest producer for these alloys in India. These are the aluminium metal recycling units located in two different districts in India, the PO has identified the plausible baseline scenario in accordance with applied simplified baseline and monitoring methodology AMS III BD – Version 01 GHG emission reduction due to supply of molten metal instead of ingots for Aluminium Castings
<b>Findings</b>	Nil
<b>Conclusion</b>	The identification (assumptions and data used) of baseline scenario to the project has been correctly applied and is in accordance with applied methodology and justified, deemed reasonable and is based on objective evidences in context to the project activity.

**e. Estimation of emission reductions or net anthropogenic removal:**

<b>Means of Project Verification</b>	<p>According to the approved methodology AMS-III BD Version 01, emission reductions are calculated as follows:</p> $ER_y = BE_y - PE_y - LE_y$ <p>Where:</p> <p><math>ER_y</math> = Emission reductions in year y (tCO<sub>2</sub>/y)</p> <p><math>BE_y</math> = Baseline Emissions in year y (t CO<sub>2</sub>/y)</p> <p><math>PE_y</math> = Project emissions in year y (tCO<sub>2</sub>/y)</p>
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	<p><math>LE_y</math> = Leakage emissions in year y (tCO<sub>2</sub>/y)</p> <p>Baseline is determined for the proposed project activity in accordance with paragraph 4 - applicability condition (c) of the Small-Scale Methodology AMS III.BD, Version 01.0 titled “GHG emission reduction due to supply of metal instead of ingots for Aluminium castings”.</p> <p>The baseline emissions are to be calculated as follows:</p> $BE_y = BE_{fuel,y} + BE_{metal,y}$ <p>Where:</p> <p><math>BE_y</math> = Baseline emissions in year y (tonCO<sub>2</sub>-e)</p> <p><math>BE_{fuel,y}</math> = Baseline emissions in the year y due to combustion of fossil fuel for melting of Aluminium ingots (tonCO<sub>2</sub>-e)</p> <p><math>BE_{metal,y}</math> = Baseline emissions in the year y due to metal loss in oxidation during melting of Aluminium ingots prior to casting (tonCO<sub>2</sub>-e)</p>
<b>Findings</b>	Nil
<b>Conclusion</b>	<p>It is confirmed by the verifier that the CoU against all referenced data sources and the requirements of applied methodology that:</p> <ul style="list-style-type: none"> <li>a) All data sources and assumptions used are listed and referenced in the PCN and are appropriate. Calculations are correct, applicable to the proposed UCR project activity and resulted in a conservative estimation of the emission reductions;</li> <li>b) All documentation used by project participants as the basis for assumptions and source of data is correctly quoted and interpreted in the PCN;</li> <li>c) All values used in the PCN are considered reasonable in the context of the proposed UCR project activity;</li> <li>d) The baseline methodology has been applied correctly to calculate project emissions, baseline emission, leakage emission and emission reductions. All equations are correctly applied and choice of ex-ante values and input values of ex-post parameters are correct and reasonable.</li> </ul>

	All estimates of the baseline emissions can be replicated using the data and parameter values provided in the PCN and annexure. Additionally, all input data used in the actual calculation of emission reductions are discussed during the remote audit and further received as Officially declared data from CMR team. Additionally, the PO supplied with some reference data to verification team which are related to the dashboards and real-time data reflected in the SCADA/SAP system at CMR. In this same manner, the verification team has randomly reviewed some of the old data from such digital records systems and found satisfactory. Hence, the submissions were accepted and approved.
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#### f. Monitoring Report

<b>Means of Project Verification</b>	Verifier checked the monitoring report with “Instructions for filling out the monitoring report form” mentioned as attachment to Monitoring report form.
<b>Findings</b>	Finding was raised related to consistency in ER values as compared to the updated final data.
<b>Conclusion</b>	Verifier confirms that final monitoring report is completed using the latest valid version of the applicable monitoring report form, information are consistent, correct and as per the requirement of the MR template.

#### g. Start date, crediting period and duration

<b>Means of Project Verification</b>	Start date of crediting period is in line with the registered PCN.
<b>Findings</b>	No finding.
<b>Conclusion</b>	Verifier confirms that monitoring report states the correct crediting period and it is in line with the PCN on the UCR web. Also, the calculations are done from the date of respective commissioning for the two units, viz. Bawal and Manesar; whereas for the other units, viz. Gurugram and Haridwar the start date is 01/01/2013. These are found to be correct w.r.t the respective commissioning date and cut-off date assigned by UCR; hence acceptable.

#### h. Positive Environmental impacts

<b>Means of Project Verification</b>	Being the Aluminium Recycling Project, there is no negative impact envisaged by the project activity. As per ‘Central Pollution Control Board (Ministry of
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	<p>Environment &amp; Forests, Govt. of India, (07/03/2016)', it has been declared that Aluminium Recycling process by CMR Group this project activity falls under the "Green category". Green Category projects/industries do not require any Environmental Clearance such as 'Consent to Operate' from PCB as such project does not lead to any negative environmental impacts. Additionally, as per Indian Regulation, Environmental and Social Impact Assessment is not required for biomass-based Projects.</p> <p>This information has been addressed under the PCN under section A.1. Also, PP has addressed some of the sustainable development attributes and it has been verified that at CDM PDD level Stakeholders Consultation meeting was conducted and no negative impact is foreseen by the stakeholders.</p> <p>However, the verification team is able to verify and confirm that the project is resulting in a net carbon positive emission reduction (COUs) and same has been transparently reported in the submitted MR supported with the ER spreadsheet. The calculation is verified with the respective data sets.</p> <p>The verifier has reviewed the emission reduction (ER) spread sheet and checked all the formulae and verified them to be correct and in line with the monitoring plan of the registered PCN and the applied monitoring methodology. All the monitored parameters are described in MR. All the ex-ante parameters which are used in the calculation of emission reduction are presented in in MR transparently. It is confirmed that all the ex-ante parameters have been correctly used in the emission reduction calculation.</p> <p>Baseline emissions:</p> $BE_y = BE_{fuel,y} + BE_{metal,y}$ $BE_y = 2,27,691 \text{ tCO}_2\text{e}$ <p>Applied equations are:</p> <div style="border: 1px solid black; padding: 5px; margin: 5px 0;"> <math display="block">BE_{fuel,y} = Q_y * [ \{ 1.07 * (660 - T_{amb}) + 390 \} / \eta_{furnace} ] * EF_{fossil\ fuel}</math> </div> <div style="border: 1px solid black; padding: 5px; margin: 5px 0;"> <math display="block">BE_{metal,y} = (b * Q_{Al} * E_{AlB} * EF_{CO_2, Alq}) / 100</math> </div>
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	<p><b>Project Emissions:</b> As per AMS-III BD version 01, the project activity specific to fuel (Diesel) consumption has been considered for GHG project emissions in the project level. <b>Thus, <math>PE_y = 4402</math>.</b></p> <p>Applied equations are:</p> $PE_y = FC_{iy} * COEF_{iy}$ $COEF_{iy} = NCV_{iy} * EF_{CO2_{iy}}$ <p><b>Leakage:</b> As per paragraph 22 of AMS-III BD version 01; 'No other leakage emissions are considered. <b>Hence, <math>LE_y = 0</math></b></p> <p><b>The final net ER value considered for claim for the current monitoring period after applying the rounded down function on each vantage/year based on the conservative grounds = 2,23,289 tCO<sub>2</sub>e (which is arrived with conservative approach)</b></p>
<b>Findings</b>	Nil
<b>Conclusion</b>	The project does not have any negative impact and has resulted in a net carbon positive emission reduction (COUs) during the current monitoring period and the same has been transparently reported in the submitted MR supported with the ER spreadsheet.

## i. Project Owner- Identification and communication

<b>Means of Project Verification</b>	<p>CMR group (i.e. PO) has declared that the project is not currently registered or availed carbon credits in other GHG programs. Also, it was discussed and reviewed independently that the customers of CMR group does not have any contractual obligation that confirms ownership of such green attributes from the project with their clients or customers, neither there is any agreement or evidence that relates to claim of carbon credits or similar benefits by the clients and customers. Thus, it has been reasonably addressed and ascertained that emission reductions generated by project will be solely claimed by PO and PO has the right of use, which</p>
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	<p>is acceptable.</p> <p>Also, the verification team has verified that the Net GHG emission reductions or removals generated by this project will not be used for compliance with an emissions trading program or to meet binding limits on GHG emissions as the host country. UCR is a voluntary platform and CoUs are not under any compliance requirement or nor does it have any binding limits.</p>
<b>Findings</b>	Nil
<b>Conclusion</b>	<p>PO will not claim any other the environmental/carbon credits under any other GHG emission reduction scheme for the crediting period under UCR and PO has provided declaration on the same during the validation. Hence, there is no possibility of double counting. Additionally, issuance of CoUs by UCR will assign unique serial numbers to each credit; which will also ensure no double accounting of such claims after issuance.</p>

#### j. Positive Social Impact

<b>Means of Project Verification</b>	<p>Not reported by PO.</p> <p>However, generic descriptions are reported in the PCN and MR, which are found justified and reasonable. Since, there is no positive claim made by PO, hence no further assessment was conducted.</p>
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#### k. Sustainable development aspects (if any)

<b>Means of Project Verification</b>	<p>Not reported by PO.</p> <p>However, a few generic descriptions and some organization level CSR activities are reported under the MR. From such generic description Verification team could reasonably accept that project is associated with a few sustainable development indicators, upto a certain extents, However, since there is no positive claim made by PO or specific SDGs are not monitored and claimed, hence no further assessment was conducted; while reported SDG indicators are accepted under “limited assurance” by the verification team.</p>
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## I. Conservativeness, Risk of Double-accounting (if any)

<b>Means of Project Verification</b>	<p><b>Conservativeness:</b> As verified from the ER sheet, MR and all reported data, the verification team assures that estimation resulted into CoUs are conservatively made. This is based on the key consideration that most of the calculation parameters are equated with default values prescribed under the methodology. Additionally, annualized values are rounded down for baseline emissions, whereas project emissions are rounded up; hence net emissions counted are the most conservative.</p> <p><b>Risk of Double-Accounting:</b> One of the key risk of double accounting realized during the assessment is parallel claim of green attributes by the clients/customers of CMR group who buy molten metal from the CMR plants. In this regard, Verification team has followed the following practices to review the risk and to ensure no-double accounting of such claims:</p> <ul style="list-style-type: none"> <li>(i) List of all the clients/customers who are associated with the CMR plants</li> <li>(ii) Shortlisting of customers who procure liquid metal from CMR (due to commercial sensitivity, the name of the customers are not reported)</li> <li>(iii) Review of the annual reports, public sites and portals of these shortlisted customers to see if any such claim of green attributes are published/declared</li> <li>(iv) Review of GHG standards (CDM, VCS, GS, UCR etc.) to identify the same or any similar projects.</li> </ul> <p>Based on all these review and analysis, the verification team could assure that during the current verification period (01/01/2013 to 31/12/2022):</p> <ul style="list-style-type: none"> <li>(i) currently no customer of the CMR group has claimed carbon credits or similar green attributes specific to CMR plants,</li> <li>(ii) there is no other carbon project in UCR or other similar GHG standards which relates to these four units of CMR or developed by any other entity,</li> <li>(iii) there is no compliance or voluntary disclosure of such carbon credits in any platform,</li> </ul> <p>Hence, verification team has opined that there is no risk of double-accounting of carbon credits for the period 01/01/2013 to 31/12/2022, related to all four plants of CMR group included under this project. Additionally, a verification statement of declaration on double accounting has been submitted by CMR group as per UCR format; which is also an official declaration from the PO ensuring no double accounting, hence the identified risk is nil or limited.</p>
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### D.3. Internal quality control

Following the completion of the assessment process and a recommendation by the verifier provided after undertaking all due diligence. Verifier has experience of more than 300 GHG audits under various sectors and having more than 15 years of experience explicitly in GHG auditing. Therefore, it can be confirmed that all standard auditing techniques applied to complete the verification task, and it's the responsibility of verifier that the reported COUs are calculated in an adequate manner by compiling all the requirements of methodology in conjunction with UCR standard.

### D.4. Project Verification opinion

As an accredited auditor, I would like to express an independent GHG verification opinion on the GHG emissions calculation and the overall reporting of the GHG emission reductions from the project for the verified monitoring period based on the required project guidance and compliance to the applied methodology. Based on an understanding of the risks associated with reporting GHG emissions data and the controls in place to mitigate these, verifier planned and performed work to obtain the information and explanations that we considered necessary, to provide sufficient evidence for us to give reasonable assurance that this reported amount of GHG emission reductions for the period is fairly stated.

GCEES hereby confirms the following;

**Reporting period** : From 01/01/2013 to 31/12/2022

**Verified emission in the above reporting period** :

Details	Value	Unit
Total baseline emissions (BE)	2,27,691	tCO <sub>2</sub> e
Total project emission (PE)	4,402	tCO <sub>2</sub> e
Leakage emission (LE)	0	tCO <sub>2</sub> e
Total net ERs for the entire period	2,23,289	tCO <sub>2</sub> e (rounded down)

#### Vantage Wise Breakup of COUs

Year	Unit	Value
2013	tCO <sub>2</sub> e (CoUs)	11,251
2014	tCO <sub>2</sub> e (CoUs)	20,101
2015	tCO <sub>2</sub> e (CoUs)	23,121
2016	tCO <sub>2</sub> e (CoUs)	24,171
2017	tCO <sub>2</sub> e (CoUs)	24,481
2018	tCO <sub>2</sub> e (CoUs)	28,898
2019	tCO <sub>2</sub> e (CoUs)	25,452
2020	tCO <sub>2</sub> e (CoUs)	22,891
2021	tCO <sub>2</sub> e (CoUs)	22,926
2022	tCO <sub>2</sub> e (CoUs)	19,997
<b>Total</b>	<b>tCO<sub>2</sub>e (CoUs)</b>	<b>2,23,289</b>

## APPENDIX A:

### Abbreviations

Abbreviations	Full texts
BE	Baseline Emissions
CAR	Corrective Action Request
CDM EB	CDM Executive Board
CL	Clarification Request
CO <sub>2</sub> e	Carbon dioxide equivalent
COU	Carbon Offset Units
DISCOM	Distribution Company
DNA	Designated National Authority
DG	Diesel Generator
DOE	Designated Operational Entity
EF	Emission Factor
ERs	Emission Reductions
FAR	Forward Action Request
GHGs	Greenhouse Gas(es)
JMR	Joint Meter Reading
kWh	Kilo Watt Hour
LE	Leakage Emissions
MR	Monitoring Report
MP	Monitoring Plan
MWh	Mega Watt Hour
PE	Project Emissions
PCN	Project Concept Note
PS	Project Standard
PO	Project Owner
QA/QC	Quality Assurance/Quality Control
T	Tonnes

## APPENDIX B:

### Document reviewed or referenced

No.	Author	Title	References to the document	Remark
1	PO	Initial MR	Version 01, 20/05/2023	Ok
2	PO	Final MR	Version 02, 27/09/2023	Ok
3	PO	ER sheet	Version 01, 20/05/2023	Ok
4	PO	Final ER sheet	Version 03, 27/09/2023	Ok
5	PO	Registered PCN	Version 01, 15/03/2023, UCR Website	Ok
6	PO	Commissioning Certificates	Corresponding to Project units	Ok
7	PO	Monthly Energy Statements and Invoices	Corresponding to Project activity, for the entire monitoring period	Ok
8	PO	Equipment, Scales, Meters & Calibration/testing details	Corresponding to Project monitoring devices, tools, scales etc. for the entire monitoring period	Ok
9	PO	Training Records	Corresponding to Project activity, for the entire monitoring period	Ok
10	PO	Declaration on Double-accounting	Corresponding to Project activity, for the entire monitoring period	Ok
11	PO	Verification Statement - No Conflict-of-Interest Statement	Corresponding to Project activity, for the entire monitoring period	Ok
12	PO	CSR related documents	Received from different regions contributed by CMR group	Ok
13	PO	ISO Certificates	Received specific to the four units, maintained regularly	OK
14	PO	NOCs and Approvals	Received specific to the four units, maintained regularly	Ok

## APPENDIX C:

### Competence of team members and technical reviewers

<b>Vivek Kumar Ahirwar</b>	<p>Vivek Kumar Ahirwar is a BEE-Certified Energy Auditor by Govt of India with over ten years of relevant experience in energy efficiency, energy audit, thermal and electrical energy generation technology from renewable source and energy conservation in energy intensive industries, designated consumers and commercial buildings, implementation of energy conservation building codes, research, process and green building projects. He is a certified lead auditor for ISO 14001 EMS and 14064. He has experience under various categories of projects stating from renewable to waste to supercritical projects and WCD. He has successfully audited more than 100 GHG (CDM/VCS/GS) projects and audits in different states across the India. He has done Master in Technology (Energy Management) from a premier institute, School of Energy &amp; Environmental Studies, DAVV, Indore (M.P.), India and Bachelor of Engineering (Mechanical Engineering) from Govt. Engineering college, Rewa, RGPV, India.</p> <p>In this current UCR verification, Vivek is the lead auditor and team leader, managed end to end to assessment as per UCR requirements,</p>
<b>Ravikant Soni</b>	<p>Ravi Kant Soni is a certified lead auditor for Lead Auditor ISO 14001:2004&amp;Lead Auditor ISO 14064:2006 GHG Inventory and verification. He has more than 10 years of work experience across Climate Change, Environmental Management &amp; Monitoring, Health &amp; Safety Management, and Statutory Compliance. He was involved in more than 100 CDM validation and verifications activities and Gold Standard, VER projects as a team leader/technical reviewer / validator / verifier covering the sectoral scope 1 technical area 1.2., 3.1. He has done Master in Technology (Energy Management) from a premier institute, School of Energy &amp; Environmental Studies, DAVV, Indore (M.P.), India and Bachelor of Engineering (Mechanical Engineering) from M.I.T.S Gwalior Jiwaji University Gwalior, India.</p> <p>In this current UCR verification, Ravikant is acting as the Technical Reviewer and conducted required review of the assessment as per UCR requirements,</p>



## APPENDIX D:

### Clarification request, corrective action request and forward action request

Table 1. CLs & CARs from this Project Verification

Descriptions	Specifications
Assessment Level:	1 <sup>st</sup> Assessment
Date of release of Assessment:	26/06/2023
Project Title:	Emission Reduction in Aluminium Recycling process by CMR Group.
UCR ID:	315
Verification Period:	01/01/2013 to 31/12/2022 (both dates are included)

Type	Date	Reference
Clarifications & Documentation	26/06/2023	UCR Monitoring Report, version 01, dated 20/05/2023
<b>Description of the Non Conformance</b>		
<ol style="list-style-type: none"> <li>PO is requested to provide all supporting documents related to the project and the current monitoring period.</li> <li>PO is requested to review the title of the project in the Monitoring Report with respect to the title registered under UCR PCN.</li> <li>PO is requested to keep all dates format consistent and all fonts and formatting of the MR document consistent.</li> <li>PO is requested to submit calibration or test certificates of all the monitoring meters (recent years) for all plants</li> <li>PO is requested to submit the project specific photos and videos for verification purpose.</li> <li>PO is requested to provide Declaration of No-Double Accounting as per UCR Requirement.</li> <li>PO is requested to provide the Communication/Authorization letter for the project representor at UCR.</li> <li>PO is requested to provide some sample copies from plant log books or screenshots from SCADA or any digital platform for key parameters such as molten metal production, fossil fuel consumption etc.</li> </ol>		
<b>1<sup>st</sup> Response from Project Owner/Representative</b>	<b>Date</b>	<b>25/07/2023</b>
<ol style="list-style-type: none"> <li>PO hereby confirm that all required supporting documents are submitted to the audit team.</li> <li>The inconsistency in project title is now removed, title is correct in the revised Monitoring Report</li> <li>The error in date formats is now resolved. Also the font and related formatting are now done appropriately.</li> <li>The references related to the meter test certificates are attached for Auditor's reference.</li> <li>The project specific photos from all the four plants and sample video submitted to audit team for further reference.</li> <li>The Declaration related to No-Double accounting is now submitted as per UCR template</li> <li>The authorization letter specific to CRM from all the respective plan is now submitted.</li> <li>The required sample copies of various plant records submitted to audit team for further references and relevance.</li> </ol> <p>Submission: Revised Monitoring Report and Final version of the CoU estimation sheet.</p>		
<b>2<sup>nd</sup> Assessment by Audit Team</b>	<b>Date</b>	<b>20/09/2023</b>
<p>The verification team has received the submitted documents and found in order. However, based on recent assessment round-II which was initiated due to updated production data and conservative approach and also towards further review and evaluation of double-accounting risks, PO is requested to revised the ER and MR and also to submit the updated UCR statement based on new CoU results.</p>		

<b>2<sup>nd</sup> Response from Project Owner/Representative</b>		<b>Date: 30/09/2023</b>
<p>PO would like to confirm that the final ER sheet is now submitted with revised final data, the corresponding results are now also updated under the MR.</p> <p>Please refer to the ER sheet, version 03, dated 27/09/2023</p> <p>And the updated MR, version 02, dated 27/09/2023</p>		
<b>3<sup>rd</sup> Assessment by Audit Team</b>		<b>Date: 03/10/2023</b>
<p>The Assessment team reviewed the final submissions and found to be acceptable. All findings are now closed.</p> <p>TR: There is no specific finding or open comment from Technical Reviewer. Hence, accepted and closed.</p>		
<b>Assessment Outcome</b>		
Closed : <input checked="" type="checkbox"/>	Forward Action Request : <input type="checkbox"/>	
Open : <input type="checkbox"/>		

## APPENDIX E:

The main equipment and tools are found available and also required calibrations were addressed. The sample copies of recent calibration details of the weighing scales and other tools are included for reference:

सत्यापन का प्रमाण पत्र  
विधिक माप विज्ञान अधिनियम, 2011  
हरियाणा विधिक माप विज्ञान (प्रवर्तन) नियम, 2011

Book No. **5956** Sr. No. **85**

निरीक्षक का नाम **P.K. Sangwan-29**

मैं इस द्वारा प्रमाणित करता हूँ कि दिनांक **06/06/22** को उपयुक्त अधिनियम के अन्तर्गत स्थापित किया गया मापन यंत्र **06/06/22** के व्यापारी सं. **ALS ECC** के निम्नलिखित ताल तथा मापों आदि का सत्यापन कर दिया है व उन पर मोहर लगा दी है।

**M/s. CMR Nikhar India (P) Ltd. Bawal**

ताल और माप आदि का भेद		ताल उपकरण / माप उपकरण		सत्यापन शुल्क		माझा परिवहन समंजन प्रभार	
मात्रा	ताल	माप	समता	श्रेणी	निर्माता	किस्म	रु०
①	EWBCP	COMT	class III				9000
②	EWBCP	ISMT	300kg	3MT			
③	EWBCP	ISMT	300kg	3MT			
सत्यापन शुल्क: <b>5000/-</b> रुपये जुमाना हो सकता है। निरीक्षक: <b>P.K. Sangwan</b> दिनांक: <b>06/06/22</b> स्थान: <b>Bawal</b>							

विधिक माप विज्ञान अधिनियम, 2009 **ALS ECC**  
विधिक माप विज्ञान (पैकेज में रखी वस्तुएं) नियम, 2011  
हरियाणा विधिक माप विज्ञान (प्रवर्तन) नियम, 2011

Book No. **4944** Sr. No. **85**

मैं इस द्वारा प्रमाणित करता हूँ कि दिनांक **06/06/22** को उपयुक्त अधिनियम के अन्तर्गत स्थापित किया गया मापन यंत्र **06/06/22** के व्यापारी सं. **ALS ECC** के निम्नलिखित ताल तथा मापों आदि का सत्यापन कर दिया है व उन पर मोहर लगा दी है।

**M/s. CMR Nikhar India (P) Ltd. Bawal**

ताल और माप आदि का भेद		ताल उपकरण / माप उपकरण		सत्यापन शुल्क		माझा परिवहन समंजन प्रभार	
मात्रा	ताल	माप	समता	श्रेणी	निर्माता	किस्म	रु०
①	EWBCP	COMT	class III				9000
②	EWBCP	ISMT	300kg	3MT			
③	EWBCP	ISMT	300kg	3MT			
सत्यापन शुल्क: <b>5000/-</b> रुपये जुमाना हो सकता है। निरीक्षक: <b>P.K. Sangwan</b> दिनांक: <b>06/06/22</b> स्थान: <b>Bawal</b>							

विधिक माप विज्ञान अधिनियम, 2009  
विधिक माप विज्ञान (पैकेज में रखी वस्तुएं) नियम, 2011  
हरियाणा विधिक माप विज्ञान (प्रवर्तन) नियम, 2011

Book No. **8143** क्रमांक नं० **043**

निरीक्षक का नाम **NK** संख्या **18**

मैं इस द्वारा प्रमाणित करता हूँ कि दिनांक **08-08-22** को उपयुक्त अधिनियम के अन्तर्गत स्थापित किया गया मापन यंत्र **08-08-22** के व्यापारी सं. **ALS ECC** के निम्नलिखित ताल तथा मापों आदि का सत्यापन कर दिया है और उन पर मोहर लगा दी है।

**CMR Green Technologies Ltd.**

ताल और माप आदि का भेद		ताल उपकरण / माप उपकरण		सत्यापन शुल्क		माझा परिवहन समंजन प्रभार	
मात्रा	ताल	माप	समता	श्रेणी	निर्माता	किस्म	रु०
①	EWBCP	COMT	class III				3000
②	EWBCP	ISMT	300kg	3MT			
③	EWBCP	ISMT	300kg	3MT			
सत्यापन शुल्क: <b>5000/-</b> रुपये जुमाना हो सकता है। निरीक्षक: <b>NK</b> दिनांक: <b>08-08-22</b> स्थान: <b>Bawal</b>							

सत्यपन का प्रमाण-पत्र

**विविध माप विज्ञान, अधिनियम 2011**

**हरियाणा विविध माप विज्ञान (प्रवर्तन) नियम 2011**

फार्म नं० माप नं० 5

क्रमांक नं० **071**

डुक नं० **8226** S.P. SINGH-15

निरीक्षक का नाम \_\_\_\_\_

रखवा **07/10/22**

मैं इस द्वारा प्रमाणित करता हूँ कि मैंने \_\_\_\_\_ दिनांक उपयुक्त अधिनियम के अन्तर्गत \_\_\_\_\_ स्थान **Mandi**, के व्यापारी से  
के निम्नलिखित तोला मात्रों आदि का सत्यापन कर दिया है और उन पर मोहर लगा दी है। अवशेषीकर कर दिया है **18x15 cm Green Technology delhi**  
तोला और माप आदि का वेद \_\_\_\_\_

मात्रा	तोला	माप	आकार	की	निर्मित	किताब	उत्पाद	%	प्रमाणित	प्रमाणित
(1)	Electronic	kg	R Gp	600g	8500					
(5)	NARS (C+J)	Cy	3 1/2	2004						
	CP	504	204	104	54					
		24	10	4	2					

भूमिकाकर्ता का नाम **Sethi** मुद्रा **Inspector Legal Metrology**

सत्यापन की अवधि तिथि **06/10/22** मुद्रा **Inspector Legal Metrology**

विशेष टिप्पणी यदि कोई हो। \_\_\_\_\_

हरे प्रमाण पत्र लगेको पर 5000/- RS. तक शुल्क है।

मुद्रा **Inspector Legal Metrology**

4th Floor, Mini Secretariat Room No. 801 के पास गंगोत्री

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**History of Documents**

Version	Date	Prepared By	Approved By
1.1	27/06/2022	AyushiGarg	Vivek Ahirwar
1.0	14/05/2022	AyushiGarg	Vivek Ahirwar

**Report is issued for further submission at UCR Registry:**




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**Vivek Kumar Ahirwar**  
**Director, GCEES**  
**05 October 2023 / Indore, India.**