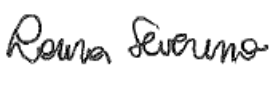




**Verified Carbon
Standard**

AAC BLOCKS PROJECT BY MOHIT INDUSTRIES LIMITED



Report ID	2023_IQ_MD_03
Project title	AAC BLOCKS PROJECT BY MOHIT INDUSTRIES LIMITED
Project ID	VCS 1238
Verification period	01-September-2021 to 24-November-2022 (Inclusive of both days)
Original date of issue	17-August-2023
Most recent date of issue	26-December-2025
Version	03.1
VCS Standard Version	4.7
Client	EKI Energy Services Limited
Prepared by	RINA Services S.p.a.
Approved by	

	Laura Severino, (Authorized officer signing for the VVB) Decarb & Chain of Custody Product Management
Work carried out by	Team Leader, Verifier, Technical Expert (TA 1.2): Vinay Singh

Summary:

RINA Services S.p.a. has been contracted by “EKI Energy Services Limited” to undertake verification and certification of the greenhouse gas (GHG) emission reduction reported from “AAC BLOCKS PROJECT BY MOHIT INDUSTRIES LIMITED”

The “AAC blocks project by Mohit Industries Limited” is located in Valsad district, Tehsil Umargaon, village Khatalwada, within state of Gujarat, India. The blocks manufacturing unit of capacity 300,000 m³/annum is designed to manufacture the AAC blocks through autoclaving process, which replaces the energy intensive production procedure of conventional baked clay bricks, which are the most common building material. The project involves production of autoclaved aerated concrete (AAC) blocks that contains thermal power plant derived waste fly ash as a major component, along with other raw materials such as cement, lime, gypsum and aluminum powder (in small quantities).

The verification is based on the VCS PD/3/, Monitoring report (MR)/1/, Emission reduction calculation spread sheet (ER sheet)/2/, additional documents related to baseline and monitoring methodology; the subsequent background investigation, follow-up interviews and supporting documents made available to the verification team by project proponent.

A risk-based approach has been followed to perform the verification of the project activity. In the course of verification, 04 Corrective Action Requests (CARs) and 00 Clarification Requests (CLs) have been raised. All the CARs and CLs have been closed out successfully.

It is our responsibility to express an independent GHG verification opinion on the GHG emissions and on the calculation of GHG emission reductions from the project for the fifth verification period 01-September-2021 to 24-November-2022 (Inclusive of both days) based on the reported emission reductions in the final monitoring report version 02 dated 29-August-2023 for the same period.

Based on an understanding of the risks associated with reporting GHG emissions data and the controls in place to mitigate these, RINA planned and performed its 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.

As a result of the verification, the verification team confirms that: The project fulfils criteria of VCS Standard Version 4.7/4/.

The project is in line with all relevant VCS requirements.

All information and references relevant to the project activity resulting in emission reductions;

The monitoring is transparent, adequate and in line with applied baseline and monitoring methodology of AMS-III.Z: Fuel Switch, process improvement and energy efficiency in brick manufacture /10/.

Based on the information seen and evaluated we confirm that the implementation of the project has resulted in 42,373 tCO_{2e} emission reductions during the monitoring period 01-September-2021 to 24-November-2022 (Inclusive of both days), under the first crediting period (25-November-2012 to 24-November-2022).

CONTENTS

1	INTRODUCTION	5
1.1	Objective	5
1.2	Scope and Criteria	5
1.3	Level of Assurance.....	6
1.4	Summary Description of the Project	6
2	VERIFICATION PROCESS	7
2.1	Method and Criteria.....	7
2.2	Document Review	8
2.3	Interviews	8
2.4	Site Visits	8
2.5	Resolution of Findings	9
2.6	Eligibility for Validation Activities	10
3	VALIDATION FINDINGS	10
3.1	Methodology Deviations.....	10
3.2	Project Description Deviations.....	10
3.3	New Project Activity Instances in Grouped Projects.....	13
3.4	Baseline Reassessment	13
4	VERIFICATION FINDINGS.....	13
4.1	Project Details	13
4.2	Safeguards and Stakeholder Engagement	17
4.3	Accuracy of Reduction and Removal Calculations.....	23
4.4	Quality of Evidence to Determine Reductions and Removals.....	63
4.5	Non-Permanence Risk Analysis.....	64
5	VERIFICATION OPINION.....	64
5.1	Verification Summary	64
5.2	Verification Conclusion	65
5.3	Ex-ante vs Ex-post ERR Comparison	66
	APPENDIX 1: COMMERCIALY SENSITIVE INFORMATION	67
	APPENDIX 2: DOCUMENT REFERENCES.....	68

APPENDIX 3: RESOLUTION OF CORRECTIVE ACTION REQUESTS AND CLARIFICATION REQUESTS	70
APPENDIX 4: SITE PHOTOGRAPHS.....	75

1 INTRODUCTION

1.1 Objective

RINA Services S.p.a. has been contracted by “EKI ENERGY SERVICES LIMITED” to undertake verification and certification for the greenhouse gas (GHG) emission reductions reported from “AAC blocks project by Mohit Industries Limited” (VCS ID 1238) for the monitoring period 01-September-2021 to 24-November-2022 (inclusive of both days), under the crediting period 25-November-2012 to 24-November-2022, in the initial monitoring report version 01 dated of 01-July-2023, with regard to the relevant requirements of VCS Standard 4.7/4/. The VCS projects must undergo an independent third-party verification and certification of emission reductions as the basis for issuance of Voluntary Emission Reductions (VERs).

The objectives of this verification exercise are, by review of objective evidence, to establish that:

- The project activity has been implemented and operated as per the project description (PD)/3/ and that all physical features (technology, project equipment, and monitoring and metering equipment) of the project are in place;
- Monitoring report/1/ and other supporting documents are complete;
- The data is recorded and stored as per the monitoring methodology and approved monitoring plan;
- To confirm that the monitoring system is implemented and fully functional to generate Voluntary Emission Reductions (VER/VCUs) without any double counting; and
- To establish that the data reported are accurate, complete, consistent, transparent and free of material error or omission by checking the monitoring records and the emissions reduction calculation.

1.2 Scope and Criteria

The verification scope is defined as an independent and objective review of monitoring report, VCS project description (VCS PD), including the monitored data, and other relevant documents made available to verifier and information collected through performing interviews during the assessment of the project activity.

The project is assessed against the requirements of VCS standard version 4.7/4/ and related rules and guidance /5/. RINA has, based on the recommendations in the latest version of the VCS Standard, employed a rule-based approach (as criteria) in the verification, focusing on the identification of significant reporting rules and the reliability of the project monitoring.

The aspects to be covered under this verification are:

- Ensure that the project activity has been implemented and operated as per the registered VCS PD and that all physical features (technology, project equipment, monitoring and metering equipment) of the project are in place as per the documents provided by the client and during the audit;
- Ensure that the monitoring report/1/ and other supporting documents provided are complete;
- Ensure that the practiced monitoring system and procedures comply with the monitoring systems and procedures described in the monitoring plan and the approved methodology /10/;
- Evaluate the data recorded and stored are as per the monitoring methodology/10/.

1.3 Level of Assurance

The level of assurance of the verification report falls under reasonable assurance engagements as selected by the Client. The verification team verified the complete monitoring data for all the parameters of the monitoring plan and confirms that the reported emission reductions are free from any type of material errors.

1.4 Summary Description of the Project

The project activity is a greenfield autoclaved aerated concrete (AAC) blocks manufacturing unit of 300,000 m³/annum capacity in Valsad district, Gujarat, India. The blocks manufacturing unit of capacity 300,000 m³/annum is designed to manufacture the AAC blocks through autoclaving process, which replaces the energy intensive production procedure of conventional baked clay bricks, which are the most common building material. The project involves production of autoclaved aerated concrete (AAC) blocks that contains thermal power plant derived waste fly ash as a major component, along with other raw materials such as cement, lime, gypsum and aluminum powder in small quantities. The project activity results in reduction of greenhouse gas (GHG) emissions and thus, plays beneficial role in the mitigation of climate change.

The production capacity of the plant has been observed to be increased from 300,000 m³/annum to 360,000 m³/annum during the current monitoring period. The project proponent has requested for approval of the deviation in the monitoring report/1/. The assessment of the same is provided in section 3.2 of the verification report.

The project activity has been operational since commissioning 25-November-2012/9/ and during the fourth monitoring period i.e., from 01-September-2021 to 24-November-2022 (Inclusive of both days), it has resulted in emission reduction of 42,373 tCO₂e. The monitoring period subject to this monitoring report is inclusive of first and last day of period.

During the audit/site inspection /11/, location (as mentioned in section 1.7 of MR) and all the technical aspects of the project activity (equipment, type, date of calibration etc.) mentioned in the PD /3/ have been verified. The same was also crosschecked during the desk review of supporting documents like technical specification /6/, and commissioning certificate /9/.

Project entity information as verified is presented below:

Item	Data
Project Entities	Big Bloc Construction Limited (Project Owner)
	EKI Energy Services Limited (Project consultant)

2 VERIFICATION PROCESS

2.1 Method and Criteria

The verification process was carried out in line with the requirements of VCS Standard Version 4.7 /4/. In addition, the verification team followed the guidelines of the VCS Validation and Verification Standard. Standard auditing techniques and RINA's VCS/CDM Procedures were also applied during the verification. A risk-based approach was followed to carry out verification and access all the factors and concerns that relate to the issuance of emission reductions from a project activity.

They include:

- Identification of all the sources contributing to the project emissions and emission reductions.
- Authenticity of the provided data is checked.
- A risk-based analysis is carried out to ensure a clear and transparent assessment. The risks involved in this process are mainly with the informational flows and data recording.

RINA follows a risk-based verification approach, wherein a desk review of the project documentation is undertaken, which is followed by a on site verification by the members of verification team. The verification protocol is filled by the verification team that is based on standard auditing practices and VCS requirements. The verification protocol provides transparent means to record the observations by the verification team members and the non- conformities, if any. The verification protocol is an internal document, and available on request.

2.2 Document Review

A desk review is undertaken, involving but not limited to,

- A review of the data and information presented to verify their completeness;
- A review of the monitoring plan and monitoring methodology, paying particular attention to the frequency of measurements, the quality of metering equipment including calibration requirements, and the quality assurance and quality control procedures;
- 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.

The list of documents reviewed is included in the Appendix 2.

2.3 Interviews

Please refer section 2.4, where complete list of interviewed personnel and key points discussed is provided.

2.4 Site Visits

Audit team has conducted a site inspection by physical visit to the project site and discussed different topics as mentioned under section 2.3 of this report. The team conducted the site visit on 17-August-2023. During the onsite verification the verification team was able to check the major equipment installed including turbines, generators as well as the monitoring equipment i.e., energy meters. The RINA team had also interviewed the local stakeholders who were found to be happy with the overall development that has been occurred in their area due to implementation of the project.

Dates:	17- August-2023
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Key points discussed:	Name of person, interviewed	Designation, Organization
Operational data	Mr. Sambasiv Rao	QC In charge, Big Bloc Construction Limited
Calibration		
Data collection, recording and archiving		
QA/QC procedures	Mr. Saroj Sahoo	General Manager, Climate Change OperationsEKI Energy Services Limited
Calculation of ERs		
VCS requirements		

2.5 Resolution of Findings

RINA focuses on high-risk issues to the verification results whilst not omitting any part of the mandatory processes. A few discrepancies were found during the verification and the verification report was submitted to the project proponent, indicated under the titles corrective action requests (CARs) and clarification requests (CLs). CARs and CLs require the PP to take relevant actions. Criteria for judging items as CAR or CL are as follows:

Corrective action request (CAR):

the project participants have made mistakes that will influence the ability of the project activity to achieve real, measurable additional emission reductions

the Voluntary Carbon Standard's requirements have not been met, or there is a risk that emission reductions cannot be monitored or calculated.

Clarification request (CL):

Information is insufficient or not sufficiently clear to determine whether the applicable VCS requirements have been met.

FAR (Forward Action Request):

FARs is to be raised to highlight issues related to project implementation that require review during the first verification of the project activity. FARs does not relate to VCS requirements for registration.

CARs and CLs are to be resolved or closed out if the PP modifies the project description, rectifies the MR or provides adequate additional explanations or evidence that satisfies the concerns. If this is not completed, the project activity cannot be recommended for issuance under VCS registry.

The monitoring report was revised addressing the CARs & CLs issued by RINA. After reviewing the revised and resubmitted MR/1/; resolving the CARs & CLs raised and outstanding concerns, RINA issues this final verification report and opinion.

00 CLs and 04 CARs and were found during verification and closed satisfactorily. The list of CARs/CLs raised and the response provided, the means of verification, reasons for their closure and references to correction in the MR are provided in appendix 3 of this report. The revised MR/1/ with changes incorporated as per the issues raised were rechecked with the documentary evidences and found to be inline.

2.5.1 Forward Action Requests

1 FAR has been raised during the previous monitoring period. No FAR has been raised during the current monitoring period. Refer to Appendix 3 for further details.

2.6 Eligibility for Validation Activities

This section is not applicable for present verification, as RINA Services S.p.A. (RINA) holds the accreditation for Validation of projects under this Sectoral Scope.

3 VALIDATION FINDINGS

3.1 Methodology Deviations

This project did not apply any methodology deviations related to Project Description.

3.2 Project Description Deviations

The deviation applied in the current monitoring period (01-September-2021 to 24-November-2022):

Deviation 1

Project activity is registered with VCS Standard 3.4 and in VCS Standard 4.0 a fixed crediting period of 10 years is introduced; deviation has been submitted to VERRA for 10 years crediting period renewable twice and it is been approved by VERRA on 15-September-2021. Ref. email communication by Matt Borden (mborden@verra.org) dated 15-September-2021.

This deviation has been of permanent nature.

There is no impact on project baseline and additionality w.r.t. this deviation.

Deviation 2

The initial (registered) production capacity of the AAC block manufacturing plant was 300,000 cubic meter per annum which has been increased to 360,000 cubic meters per annum w.e.f 19-February-2021. This was done by the project proponent to meet the growing demand of AAC

blocks in the region. The production capacity intimation letter submitted by the project proponent/24/ has been reviewed and found to be appropriate.

The project proponent has applied an alternate approach to account the emission reduction to corresponding to the original capacity, 300,000 cubic meter per annum in stead of the increased capacity, i.e. 360,000 cubic meter per annum. The project proponent has apportioned the production based on the actual PLF realized in the monitoring period (with 360,000 cubic meter per annum capacity). The monthly PLF values calculated based on 360,000 cubic meter per annum are applied with the original capacity as per registered PD, 300,000 cubic meter per annum.

This should be noted that while calculating the monthly PLF based on the increased capacity, i.e. 360,000 cubic meter per annum, in some of the months the monthly PLF value has been gone up to close to 100%. As the PLF is calculated by considering the monthly calculated capacity, 30,000 cubic meter ($360,000/12$), the monthly PLF may go beyond 100% (with the capacity of 30,000 cubic meter). The reason behind increased PLF in a month is less number of public holidays in a particular month (i.e. more number of working hours) and availability of raw materials. Moreover, the production in the monsoon months has been observed to less than the dry months due to availability/transportation of raw materials as well as finished product and a decreased demand in construction sector. Evidently, the actual PLF of the project plant in the monsoon months (June-July-August) is found to be less than the dry month.

The verification team has observed that the high PLF in the initial months of capacity enhancement. particularly in the month of December 2022¹ was very temporary due the changes made in the plant in the manufacturing plant. The temporary increase in PLF beyond 100% is possible for a short period of time on account of sudden surge in demand or performance improvement of recent upgraded equipment in the plant.

In the context of a brick factory, where production is often seasonal or responds to market demand, periods of high production leading to a PLF more than 100% is probable. However, a continuous PLF over 100% would be highly unusual and likely indicates a faulty assumption in the capacity calculation. As it could be noticed, the PLF for entire years (from September 2021 to August 2022) has been effectively calculated to be 87%. Thus, the verification team concludes that the PLF of 107% in the month of December 2021 is acceptable.

As the annual average PLF has been calculated to be less (87% for Sep-2021 to Aug-2022 and 69% for Sep-2022 to Nov-2022), the same has been found to be appropriate and acceptable.

Further, when the production quantity of the AAC block has been considered based on apportionment approach to account the production corresponding to the original capacity for baseline emission calculation, the project emission and leakage emission has been calculated based on the entire quantities of consumable items based on the increased capacity of 3,60,000 cubic meter per annum. This has been found to be conservative and acceptable being in line with paragraph 3.21.3 of the project standard/4/ which requires the project not to claim additional emission reduction resulting from a project description deviation.

The increased production capacity of the plant does not impact the applicability of the methodology, additionality or the appropriateness of the baseline scenario, and the project remains in conformance with the applied methodology even after the capacity enhancement. The additionality of the project was demonstrated using the barrier analysis at the time of project registration, hence, the financial impact due to the change in production capacity would not put any impact of additionality of the project.

The barrier demonstrated by the project proponent at the time of registration was barrier due to prevailing practice. It has been observed that burnt clay bricks are still continuing to be the prevailing walling material that is widely used in India and since the market share of other bricks/blocks manufacturing technology is negligible as compared to the burnt clay bricks, options. As per a report, *Roadmap for Promoting Resource Efficient Bricks in India: A 2032 strategy*, prepared by Shakti Sustainable Energy Foundation/27/, the solid burnt clay bricks hold the largest production share of about 89% and concrete blocks, AAC blocks, and fly ash lime/cement bricks are the other dominant brick types, accounting together for 10% of the production share. The production share of the remaining types of bricks is thus very negligible.

As per the report published by the Bureau of Energy Efficiency on Market Transformation towards Energy Efficiency in Brick Sector/31/, out of 250 billion of bricks produced annually, 85% are burnt clay bricks where as the remaining 15% non-fired bricks (AAC blocks, flyash bricks, concrete blocks, etc.). This means the other types of brick which includes flyash bricks contributes only 40 billion bricks out of 250 billion bricks produced annually in India.

As per another report published by Bureau of Energy Efficiency on Report on Energy & Resource Mapping of MSME Brick Sector in February 2022/31/, energy efficient brick projects still face multiple barriers which has caused such low penetration rate of such technologies in the host country, India.

As per the report/31/, there are multiple barriers in the form of Policy & Regulatory Barriers, Technology Barriers, Capacity & Knowledge Barriers, Financial Barriers, Market Barrier are still existing in the Indian brick sector which hinders faster adoptable of energy efficient technologies. The report mentions that the building construction industry in India is a very conservative sector, and the process of adoption of new building materials and construction technologies is long and slow. The rate of adoption of resource efficient bricks is still low and multi-dimensional approach is required to overcome the market barrier.

Therefore, the verification team concludes that the project still faces barrier due to prevailing practice and remains additional as on date.

Deviation 3

The Diesel is consumed for auxiliary operations by machinery and equipment used in the project activity, such as forklifts, JCBs, and other similar equipment.

The project proponent has included this source of fossil fuel consumption to account it for project emission. This is conservative and hence acceptable. This shall not put any impact on baseline or additionality demonstration of the project.

3.3 New Project Activity Instances in Grouped Projects

The project is not a grouped project. Therefore, this section is not applicable.

3.4 Baseline Reassessment

Did the project undergo baseline reassessment during the monitoring period?

☐ Yes ☒ No

4 VERIFICATION FINDINGS

4.1 Project Details

Item	Evidence gathering activities, evidence checked, and assessment conclusion:			
Audit history	Audit type	Period	Validation/verification body name	Number of years
	Validation/verification	25-November-2012 to 24-November-2022	SGS United Kingdom Limited	10 years
	Verification	25-November-2012 to 31-December-2014	Earthood Services Private Limited	2 years 1 month 7 days
	Verification	01-January-2015 to 31-August-2017	Earthood Services Pvt. Ltd.	2 years 08 months
	Verification	01-September-2017 to 31-December-2020	KBS Certification Services Pvt. Ltd.	3 years 4 months

	Verification	01-January-2021 to 31-August-2021	KBS Certification Services Pvt. Ltd	8 months
	Verification (ongoing)	01-September-2021 to 24-November-2022	RINA	1 year 2 months 24 days
	The above audit history of the project has been verified and confirmed by the assessment team from the VERRA project portal and previous validation and verification reports.			
Double counting and participation under other GHG programs	The project is not receiving or seeking credit for reductions and removals from a project activity under another GHG program. The project proponent has submitted an undertaking/22/ to the verification team declaring that the project is not registered under any other carbon standard or rejected or under the process of registration or shall apply for registration in future in any other GHG program. The assessment has checked the websites of other carbon registries like Clean Development Mechanism (CDM)/23/, Gold Standard (GS)/23/ and Global Carbon Council (GCC)/23/ etc. and found that the project is not registered under any other carbon standard. The verification team has observed from the other GHG programs that only the manufactures of the AAC block have been the applicant of carbon credits in the carbon registries and no other parties have including the consumers or suppliers of the AAC block has applied for the same. This is due to the fact the quantity procured by them and the resulting carbon credits may not make it feasible for registration and issuance process under a carbon mechanism. Moreover, a consumer/supplier while applying for the registration shall necessarily obtain a no objection certificate from the manufacturer (project proponent) necessarily to demonstrate ownership. Furthermore, the project proponent during interview has explained that they have a provision to obtain a declaration or agreement from the purchaser/procurer not to apply for carbon credits when the quantity of the AAC block is felt sizeable and has a potential to apply for registration of the same under a carbon mechanism. As per the requirement defined vide section 3.24.7 of the VCS standard, Version 4.7/4/, the project proponent has published a statement regarding claim of carbon credits from the project. The			

	official company website/23/ of the project proponent has been checked by the verification team and found appropriate. Thus, the verification team concludes that the any possibility of double counting and participation under other GHG programs is unlikely and avoided.								
No double claiming with emissions trading programs or binding emission limits	The project is not receiving or seeking credit for reductions and removals from a project activity under other emissions trading programs or binding emission limits. The project proponent has submitted an undertaking/22/ to the verification team declaring that the project is not claiming any credit under any other emissions trading programs or binding emission limits. This has also been confirmed by the assessment team by interview with the concerned person from the project proponent								
No double claiming with other forms of environmental credit	The project is not receiving or seeking any other forms of environmental credit for reductions and removals from a project activity. The project proponent has submitted an undertaking/22/ to the verification team declaring that the project is not claiming any other form of environmental credit under any other emissions trading programs or binding emission limits. The assessment team also checked the official website of renewable certificate registry of India/23/ and confirmed that the project not registered under it to claim REC benefit. This has also been confirmed by the assessment team by interview with the concerned person from the project proponent.								
Supply chain (scope 3) emissions double claiming	The project proponent is an independent power producer and not involved in any other business activity where it can act as a buyer or seller of a product whose emission footprint is changed by the project activity. This has been confirmed by the assessment team by interview with the concerned person from the project proponent.								
Sustainable development contributions	As declared by the project proponent in section 1.12 of the monitoring report/1/, the project contributes to below sustainable development goals: <table><tr><td>SDG</td><td>SDG Target</td><td>SDG Indicator</td><td>VVB assessment</td></tr><tr><td></td><td></td><td></td><td></td></tr></table>	SDG	SDG Target	SDG Indicator	VVB assessment				
SDG	SDG Target	SDG Indicator	VVB assessment						

	4	4.4	4.4.1: Proportion of youth and adults with information and communications technology (ICT) skills, by type of skill	15 trainings were imparted to the employees. The same can be cross checked with the employment records & the training records pertaining to the project instances.
	12	12.5	12.5.1: National recycling rate, tons of material recycled	The project contributes to this SDG by Recycling the produced waste. the project has used 1,434,221.6 (145,781.9+543,205.15+465,527.47+104802.71 + 174,904.37) MT of fly ash which could have been dumped with no usage while increasing atmospheric pollution. This has been verified from the previous periodic verification reports and the current monitoring report/01/.
	13	13.2	13.2.2: Total greenhouse gas emissions per year	The project contributes to this SDG by avoiding GHG emission due to generation of renewable form of the energy from a wind power project. The project has avoided 408,633 tCO₂e being emitted to the environment till date i.e. from the date of commissioning of the project till end of this monitoring period. This has been verified from the previous periodic verification reports /03/ and the current monitoring report/01/.

Additional information relevant to the project

No commercially sensitive information has been mentioned in the monitoring report to have been excluded from the public version of the project documents. This has also been confirmed during interview with the concern person from the project proponent.

4.2 Safeguards and Stakeholder Engagement

4.2.1 Stakeholder Identification

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Stakeholder identification	There has not been any change to the stakeholder makeup since validation of the project stakeholders have been identified for this project activity by analysing the beneficiaries /people who are directly affected in daily life by the project activity, impact of local/regional/provincial/national government policies in implementation and operation of the project activity, other groups having social/political influences in the project location The verification team concludes that composition of stake holder category for the project activity has remained unchanged.
Legal or customary tenure/access rights	The PP holds the company ownership and land-use rights, granted through specific legal statutes.
Stakeholder diversity and changes over time	Stakeholders identified for this project activity are diverse in nature – in terms of socio-economic status, age and gender wise and the diversity is unlikely to change over time.
Expected changes in well-being	Expected changes 1. Economic well-being – the project activity is likely to provide employments to the locality thus economic well beings are expected 2. Environmental well-being – as this project activity reduces the dependence on fossil fuels and conserves natural resources which are on the verge of depletion. Due to its zero emission the Project activity also helps in avoiding significant amount of GHG emissions and specific pollutants like SO_x, NO_x, and SPM associated with the conventional thermal power generation facilities.

Location of stakeholders	The stakeholders of the project activity are situated within the geographical boundaries of India. More information has been incorporated in section 1.8 of the monitoring report/1/.
Location of resources	In terms of the location of territories and resources owned or accessed by stakeholders, it can be stated that they possess ownership of their respective lands in the Village: Gurevepalli / Marrimakulapalli, District: Anantpur, State: Andhra Pradesh It is notable, that no land/territorial resource from the stakeholder has been used for the project activity implementation.

4.2.2 Stakeholder Consultation and Ongoing Communication

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Ongoing consultation	Stakeholders' consultation is a continuous process and hence a feedback register is kept at the project site office where any stakeholder can come and share his/her feedback. The feedback irrespective of the type is taken care by PP with utmost priority.
Date(s) of stakeholder consultation	23-Septmber-2013
Communication of monitored results	The meeting was outlined towards making aware local stakeholders including local community, local administration representatives, NGOs working for environmental cause etc., about the project activity that involves electricity generation using biogas produced by treating poultry litter with the primary objective of reducing emissions of GHGs in compared to pre-project or baseline scenario. The feedbacks/comments received from stakeholders were quite positive and no negative comments were received during the current monitoring period. The questions asked by stakeholders were only on process and these ere explained by PP representatives.
Consultation records	Grievance register
Stakeholder input	The feedbacks/comments received from stakeholders were quite positive and no negative comments were received. The questions asked by stakeholders were only on process and these ere explained by PP representatives.

4.2.3 Free, Prior, and Informed Consent

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Consent	Not Applicable
Outcome of FPIC discussion	Not Applicable

4.2.4 Grievance Redress Procedure

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Grievance received and steps taken to resolve the grievance including the outcomes of the resolution	Feedback register/ Grievance register/20/ is kept at project site office where any stakeholder can come and register his/her feedback. The grievance register is being for submission of input/ grievance (if any) related to the project activity. The queries by stakeholders (during question-and-answer session) are noted and documented in the grievance register. The grievance register/20/ maintained at project site submitted is verified by the verification team which is found appropriate.
Grievance redress procedure	Feedback register/ Grievance register is kept at project site office where any stakeholder can come and register his/her feedback.

4.2.5 Public Comments

Comments received	Actions taken by the project proponent	Evidence gathering activities, evidence checked, and assessment conclusion
No Comments Received	Not Applicable	Not Applicable

4.2.6 Risks to Local Stakeholders and the Environment

Item	Evidence gathering activities, evidence checked, and assessment conclusion
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Risks to stakeholder participation	There is no limitation or restriction for any stakeholders to participate and submit their feedback about the project. The site persons were interviewed and the procedure maintained were checked by the verification team to conform the same.
Working conditions	The manufacturing plant was physically verified and site team was interviewed during site visit and it was observed that the working condition at the project site is safe friendly. The project proponent has obtained all the permissions and approvals required to operate the plant which were verified and found to be satisfactory. The project proponent has implemented various policies and measures to create a safe and healthy workplace while minimizing environmental impact. Regular communication, training, and awareness programs are conducted in the project factory to ensure that the employees fully understand and comply with our EHS (Environment, Health, and Safety). The verification team has reviewed the information on HSE and sustainability reporting published at the website of the project proponent/32/ which has been found to be appropriate.
Safety of women and girls	The project proponent has confirmed during interview that there is no discrimination or sexual harassment occurs at workplace and has created a workplace that is free of sexual harassment and discrimination. In compliance of provisions of the Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013 (“POSH Act”) and Rules framed thereunder, the project proponent has formulated and implemented a policy on prohibition and redressal of complaints related to sexual harassment of women at the workplace. The verification team has reviewed the information on Environmental, Social, and Governance (ESG) reporting published at the website of the project proponent/32/ which has been found to be appropriate.
Safety of minority and marginalized groups, including children	There is no discrimination made among the workers in respect to remuneration and other treatment in the project. The same was discussed during onsite audit by the verification team, It was confirmed that there is no child labor employed at the site. As per the Business Responsibility & Sustainability Report for the year, 2023-24 prepared by the project proponent, there is no vulnerable & marginalized Group stakeholder identified. The verification team has reviewed the Business Responsibility & Sustainability Report for the year, 2023-24 prepared by the project proponent/32/ and found satisfactory. So, there is no risk identified.

Pollutants (air, noise, discharges to water, generation of waste, release of hazardous materials)	The fly ash used as the primary raw material has replaced the mud clay used in the manufacturing of the burnt clay bricks in the baseline scenario. The use fly ash has huge environmental benefits over the mud clay. The project proponent has considered the emission due to the transportation of the raw material as leakage emission to calculation emission reduction. As mentioned in the MR, the production or mining activity of raw material would also been there in the production of baseline bricks. Thus, this has been assessed appropriately to be not applicable for the project.
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4.2.7 Respect for Human Rights and Equity

4.2.7.1 Labor and Work

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Discrimination and sexual harassment	PP has provided declaration that no discrimination or sexual harassment has occurred or will occur. Demonstrate that no discrimination or sexual harassment has occurred.
Management experience	Not Applicable
Gender equity in labor and work	PP provides equal opportunities in the context of gender equity and pay for labor and work.
Human trafficking, forced labor, and child labor	This project activity does not use victims of human trafficking, forced labor, and child labor.

4.2.7.2 Human Rights

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Human rights	The representative of the project proponent has clarified and declared during interview that there will be no human rights violation of any kind to any of the stakeholders during construction and operation of the project activity.

4.2.7.3 Indigenous Peoples and Cultural Heritage

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Preservation and protection of cultural heritage	PP is committed to protect regional as well as national cultural heritage

4.2.7.4 Property Rights

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Disputes over rights to territories and resources	Not Applicable
Respect for property rights	Not Applicable

4.2.7.5 Benefit Sharing

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Summary of the benefit sharing plan	Not Applicable
Benefit sharing during the monitoring period	Not Applicable

4.2.8 Ecosystem Health

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Impacts on biodiversity and ecosystems	No impact on biodiversity is likely to be caused due to the project activity.

Soil degradation and soil erosion	The project activity mitigates soil degradation and erosion by minimizing the extensive need for wood gathering, thereby reducing deforestation and soil exposure
Water consumption and stress	This project activity does not have any negative impacts on water consumption and does not lead to water stress in any way.
Usage of fertilizers	There is no dedicated plantation is involved in the project. So, no fertilized is used in the project. Hence, this is not applicable.

4.2.8.1 Rare, Threatened, and Endangered species

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Species or habitat	Not Applicable

4.2.8.2 Introduction of Species

Species introduced	Evidence gathering activities, evidence checked, and assessment conclusion
Not Applicable	Not Applicable

Existing invasive species	Evidence gathering activities, evidence checked, and assessment conclusion
Not Applicable	Not Applicable

4.2.8.3 Ecosystem conversion

Item	Evidence gathering activities and evidence checked
Ecosystem conversion	Not Applicable

4.3 Accuracy of Reduction and Removal Calculations

In addition to the interviews with rural households, representatives of project proponent and physical inspection, assessment team have checked the all the documentation and found that the project activity is implemented as per the registered VCS PD/3/ and Monitoring report/1/ submitted by the project proponent for the current monitoring period.

Means of verification	The verification team assessed whether the data and calculations of GHG emission reductions achieved resulting from the MR. The verification team has checked whether calculations of baseline GHG emissions, project GHG emissions and
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	leakage GHG emissions have been carried out in accordance with the formulae and methods described in the monitoring plan of the MR. Verification team was able to verify during site audit that authorities and responsibilities for monitoring and reporting of all data related to the emission reductions were clearly defined for the monitoring period from 01-September-2021 to 24-November-2022 (Inclusive of both days). The allocation of the responsibilities is documented in a written form and is followed as described in the registered VCS PD/3/. Routines for the archiving of data are defined and documented. The monitoring plan described in section 4.3 of the MR/1/ is confirmed to be correct. All the parameters of the monitoring plan are monitored using appropriate metering system. The verification team has interviewed the plant personnel /11/ involved in the monitoring of the parameters that are used to determine the emission reductions of the project. It is confirmed based on the interviews /11/ that the plant's team is competent enough to monitor the parameters as described in the monitoring plan. As discussed above, the verification team concludes that management and operational system of the project is implemented and operated well. Thus, it ensures the quality of data which is required for calculation of emission reduction. <u>Implementation status of the monitoring plan:</u> Verification team confirms through site inspection /11/ and from the document review/6//7//8//9///13//14//15//16//17//18//20/ that the actual monitoring system complies with the monitoring plan mentioned in the registered VCS PD /3/. During the verification, all relevant monitoring parameters of the registered monitoring plan have been verified with regard to the appropriateness of the verification method; the correctness of the values applied for ER calculation, the accuracy and applied QA/QC measures. All monitoring parameters have been measured / determined without material misstatements and are in line with all applicable standards and relevant requirements. It is confirmed that the monitoring mechanism is effective and reliable. Therefore, through the document review and site audit inspection, it is confirmed that all the parameters were monitored in accordance with the registered monitoring plan during the monitoring period. Following are the details of monitoring in accordance with the monitoring plan of the registered VCS PD/3/: The emission reduction calculation has been done as per the registered VCS PD/3/ of the project as follows: $ER_y = BE_y - PE_y - LE_y$
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Where,

BE_y = Baseline emission per year (tCO_2e)

PE_y = Project emission per year (tCO_2e)

LE_y = Leakage emission per year (tCO_2e)

Below are the ex-ante parameters sourced from the registered VCS PD/3/ of the project and used for emission reduction calculation.

1. EF_{BL} = The annual production specific baseline emission factor = $0.3993 tCO_2/m^3$
2. $COEF_{cement}$ = CO_2 emission factor of cement production = $0.638 \times 10^3 tCO_2e/kt$
3. $COEF_{aluminium}$ = CO_2 emission factor of aluminium production = $1.7 \times 10^3 tCO_2e/kt$
4. $COEF_{lime}$ = CO_2 emission factor of lime production = $0.75 \times 10^3 tCO_2e/kt$
5. $COEF_{gypsum}$ = CO_2 emission factor of gypsum production = $0.01 tCO_2e/t$
6. $EF_{CO_2,f}$ = Default CO_2 emission factor for freight transportation activity f = Light vehicles – 245 Heavy vehicles – 129 $gCO_2/t\cdot km$. The project proponent has considered actual type of vehicles used for the transportation for the raw material. Only for transportation of Gypsum and Aluminium power, light vehicles are used whereas for all other raw materials, heavy vehicles are used during the monitoring period. The raw material invoices/14/ and weigh bridge data/transportation records/16/ submitted by the project proponent have been verified and it has been confirmed that the type of the vehicles used for transportation of the raw material has been correctly considered.
7. D_{brick} = Density of each baseline brick produced = $1920 Kg/m^3$
8. W_{brick} = Weight of each baseline brick produced = 3.75 kg
9. $EF_{CO_2,brick}$ = CO_2 emission per baseline brick produced = $0.78 kgCO_2/brick$
10. $EF_{EL,plant,y}$ = Emission factor for electricity used in project plant in year y = $1.3 tCO_2/MWh$
11. $TDL_{plant,y}$ = Average technical transmission and distribution losses for providing electricity to project plant in year y = 20%

All parameters mentioned as ex-ante fixed parameters. Assessment team checked the values, source of data, choice of data, purpose of the data mentioned in the MR from the registered VCS PD/3/ and confirms that the similar approach was considered for the current monitoring period also.

As per the registered VCS PD /3/ following parameter needs to be monitored ex-post during the monitoring period:

Data / Parameter	Compressive strength of AAC blocks
Data unit	N/mm^2
Description	Compressive strength of project blocks
Source of data	Verification team confirms that the data has been measured directly from Laboratory test report/18/ by

		the third party, which has been reviewed and the data was found to be consistent.										
	Description of measurement methods and procedures to be applied	During the site visit and through document review/18/, it has been confirmed that the compressive strength of the project block has been tested in nationally approved laboratory.										
	Frequency of monitoring/recording	The monitoring and recording frequency is once in 6 months as verified during site visit and through the review of reports /18/.										
	Value monitored	<table><tr><td>Date of test</td><td>Value (N/mm²)</td></tr><tr><td>18/09/2021</td><td>4.85</td></tr><tr><td>08/03/2022</td><td>4.51</td></tr><tr><td>05/09/2022</td><td>4.33</td></tr><tr><td>Avg</td><td>4.56</td></tr></table> The monitored values are as sourced from the laboratory test report /18/ and was found to be in accordance to the prevalent industry standards. In accordance with the paragraph 11 of the applied methodology/10/, the monitored compressive strength of the project activity AAC blocks (see above table) has been compared to the baseline clay bricks. The data of baseline bricks as per Indian Standard on common burnt clay building bricks – specifications (IS 1077:1992) published by Bureau of Indian Standards, Government of India/25/, is 3.5 N/mm² for the lowest class of clay bricks. Whereas the average compressive strength of AAC blocks (see above table) as taken from laboratory test report/18/ is 4.56 N/mm² which is more than the compressive strength of lowest class of baseline bricks.	Date of test	Value (N/mm ²)	18/09/2021	4.85	08/03/2022	4.51	05/09/2022	4.33	Avg	4.56
	Date of test	Value (N/mm ²)										
	18/09/2021	4.85										
	08/03/2022	4.51										
	05/09/2022	4.33										
	Avg	4.56										
	Monitoring equipment	Not applicable as this is monitored by third party laboratory										
QA/QC procedures to be applied	The assessment team during site audit confirms NABL accredited laboratory has been appointed for all the lab analysis, which is acceptable to the assessment team.											
Purpose of the data	Calculation of Baseline Emissions											
Calculation method	This is a measured data. Hence not applicable											
Comments	As confirmed during the site audit, all the data would be achieved for a minimum of 2 years after the end of the											

	Data / Parameter	Density of AAC blocks													
	Data unit	kg/m ³													
	Description	Density of AAC blocks													
	Source of data	Verification team confirms that the data has been measured directly by Laboratory test report/18/.													
	Description of measurement methods and procedures to be applied	During the site visit and through document review/18/, it has been confirmed that the density of the project block has been tested at a nationally approved laboratory.													
	Frequency of monitoring/recording	The monitoring and recording frequency are once in 6 months as verified by the verification team through site visit. However, internal lab tests/18/ are conducted by the PP more frequently to ensure the density of blocks for QA/QC purpose.													
	Value monitored	<table><tr><td>Report date</td><td>Block density</td></tr><tr><td></td><td>kg/m³</td></tr><tr><td>18/09/2021</td><td>567.00</td></tr><tr><td>08/03/2022</td><td>552.00</td></tr><tr><td>05/09/2022</td><td>590.00</td></tr><tr><td>Avg</td><td>569.67</td></tr></table> The monitored values as sourced from the NABL accredited lab test report /18/ has been checked by the verification team and was found to be in accordance to the prevalent industry standards.		Report date	Block density		kg/m ³	18/09/2021	567.00	08/03/2022	552.00	05/09/2022	590.00	Avg	569.67
	Report date	Block density													
		kg/m ³													
	18/09/2021	567.00													
	08/03/2022	552.00													
	05/09/2022	590.00													
Avg	569.67														
Monitoring equipment	Not applicable as this is monitored by third party laboratory														
QA/QC procedures to be applied	The assessment team during site audit confirms NABL accredited laboratory has been appointed for all the lab analysis, which is acceptable to the assessment team.														
Purpose of the data	Calculation of Baseline emissions														
Calculation method	Not Applicable. This is a measured data														
Comments	As confirmed during the site audit, all the data would be achieved for a minimum of 2 years after the end of the crediting period or last verification, whichever occurs later.														
	crediting period or last verification, whichever occurs later.														

	Data / Parameter	P _{PJ,y}						
	Data unit	m ³						
	Description	The annual production of the facility in year y						
	Source of data	Verification team confirms that the data has been sourced from plant records/17/.						
	Description of measurement methods and procedures to be applied	During the site visit and through document review/17/, it has been confirmed that the number of standardized size cakes manufactured has been converted to volume units and is monitored continuously.						
	Frequency of monitoring/recording	The monitoring frequency is continuous and recording frequency is daily as verified by the verification team through site visit assessment. For the purpose of monitoring the annual production of the facility, daily counting of the blocks was done and recorded. The number of blocks/cake are then multiplied with the volume of each type of the blocks to find total production. The formula used is as follows: Production(m³) = (Number of cakes x volume of the cake (m³)) No. of cakes has been cross-checked through Blocks selling data(invoices)/14/ and blocks stocks change data /17/maintained in the logbook records daily and transferred for quantification of monthly and annual values.						
	Value monitored	<table><tr><td></td><td>01-September-2021 to 31-December-2021</td><td>01-January-2022 to 24-November-2022</td></tr><tr><td>m³</td><td>113,961.24</td><td>262,454.40</td></tr></table> The recording frequency of the parameter is daily, however monthly readings has been demonstrated in MR and ER sheet/2/. This has been done for ease of reporting. Monthly readings as reported in MR/1/ and ER sheet/2/ were cross-checked using the summation of daily readings for the specific duration from plant records. They were found to be consistently reported. It should be noted that the initial (registered) production capacity of the AAC block manufacturing plant was 300,000 cubic meter per annum which has been increased to 360,000 cubic meters per annum w.e.f 19-February-2021. This was done by the project proponent to meet the growing demand of AAC blocks in the region.			01-September-2021 to 31-December-2021	01-January-2022 to 24-November-2022	m ³	113,961.24
	01-September-2021 to 31-December-2021	01-January-2022 to 24-November-2022						
m ³	113,961.24	262,454.40						

		The production capacity intimation letter submitted by the project proponent/24/ has been reviewed and found to be appropriate. The project proponent has sought approval of this deviation in line with paragraph 3.21 of the VCS standard/4. The detail assessment on the same is included in section 3.2 of the verification report. The project proponent has applied an alternate approach to account the emission reduction to corresponding to the original capacity, 300,000 cubic meter per annum in stead of the increased capacity, i.e. 360,000 cubic meter per annum. The project proponent has apportioned the production based on the actual PLF realized in the monitoring period (with 360,000 cubic meter per annum capacity). The monthly PLF values calculated based on 360,000 cubic meter per annum are applied with the original capacity as per registered PD/3/, 300,000 cubic meter per annum. This has been found to be appropriate and acceptable by the verification team. Further, when the production quantity of the AAC block has been considered based on apportionment approach to account the production corresponding to the original capacity for baseline emission calculation, the project emission and leakage emission has been calculated based on the entire quantities of consumable items based on the increased capacity of 3,60,000 cubic meter per annum. This has been found to be conservative and acceptable being in line with paragraph 3.21.3 of the project standard/4/ which requires the project not to claim additional emission reduction resulting from a project description deviation.
	Monitoring equipment	Number of blocks produced have been cross checked with the blocks selling data/14/ and blocks stock changing data maintained in the logbook/17/.
	QA/QC procedures to be applied	Blocks selling data(invoices)/14/ and blocks stocks changing data from logbook/17/ has been used for cross verification of the data. The readings are being recorded by operators in block selling records and block stocks for each day. Efficiency of transfer of data is being monitored by supervisor onsite. Site assessment reveal that inventORIZATION of data has been done efficiently and data management procedures has been followed for both hard and soft versions of data. Additionally, Interview with the monitoring personnel revealed that employees were well verse of the QA/QC procedures to be followed for data monitoring. Thus, it

		can be concluded that all the QA/QC requirements are in place.						
	Purpose of the data	Calculation of Baseline Emissions						
	Calculation method	Production(m³) = (Number of cakes x volume of the cake (m³)						
	Comments	As confirmed during the site audit, all the data would be achieved for a minimum of 2 years after the end of the crediting period or last verification, whichever occurs later.						
	Data / Parameter	FC _{coal,y}						
	Data unit	kT						
	Description	Quantity of coal combusted by the project activity boiler during the year y						
	Source of data	Verification team confirms that the data has been sourced directly from plant log books/17/.						
	Description of measurement methods and procedures to be applied	During the site visit/11/ and through document review, it has been confirmed that the coal consumption has been measured with Electronic Weighbridge. Coal inventory has been maintained and monitored through the equation: Coal consumed = Opening Stock + Purchases – Closing Stock Verification team has checked the overall consumption records /17/, stock data and Invoices/14/ from the suppliers to confirm the quantity of coal purchased and consumed.						
Frequency of monitoring/recording	The monitoring and recording frequency is daily as verified by the verification team during site visit.							
Value monitored	<table><tr><td></td><td>01-September-2021 to 31-December-2021</td><td>01-January-2022 to 24-November-2022</td></tr><tr><td>kt</td><td>3.12</td><td>7.44</td></tr></table> Verification team confirms that the data for consumption has been cross verified through consumption records/17/, stock data and Invoices/14/ from the suppliers.			01-September-2021 to 31-December-2021	01-January-2022 to 24-November-2022	kt	3.12	7.44
	01-September-2021 to 31-December-2021	01-January-2022 to 24-November-2022						
kt	3.12	7.44						
Monitoring equipment	<table><tr><td>Electronic weighbridge has been used to</td><td>Weighbridge</td></tr></table>		Electronic weighbridge has been used to	Weighbridge				
Electronic weighbridge has been used to	Weighbridge							

		measure the parameterEquipment	
		Manufacturer	Endeavour industries Pvt Ltd.
		Serial no.	09201718
		Accuracy class	III
		Calibration date	22-September-2019 09-September-2020 24-November-2021
		Calibration due date	23-November-2022
	QA/QC procedures to be applied	The assessment team during site audit confirms that the QA-QC of parameter has been ensured by timely calibration of the weighbridge by the Legal Metrology Division, which is annual. Therefore, calibration frequency has been kept intact which could be verified from the calibration certificates/13/. Further, the accuracy of the monitoring equipment is as per the registered monitoring plan. However, it has been observed that the calibration of the weighbridge was not valid for the period from 10-September-2020 to 23-November-2021. The project owner has thus applied maximum permissible error of 0.05% (for call III accuracy class weighing scale/30/) for the initial 3 months of the recorded values. This has been found to be appropriate by the verification team. The calculation approach in the emission reduction calculation sheet/2/ has been checked by the verification team and found to be correct. Site assessment reveal that inventorisation of data has been done efficiently and data management procedures has been followed for both hard and soft versions of data. Additionally, Interview with the monitoring personnel revealed that employees were well verse of the QA/QC procedures to be followed for data monitoring. Thus, it can be concluded that all the QA/QC requirements are in place.	
	Purpose of the data	Calculation of Project Emissions	

	Calculation method	It has been confirmed that the data has been calculated by the formula: Quantity = Opening Stock + Purchases – Closing stock	
	Comments	As confirmed during the site audit, all the data would be achieved for a minimum of 2 years after the end of the crediting period or last verification, whichever occurs later.	
	Data / Parameter	NCV _{coal,y}	
	Data unit	TJ/kt	
	Description	Weighted average net calorific value of coal in the year y	
	Source of data	Verification team confirms that the data has been sourced from IPCC 2006 Vol. 2 Chapter 1	
	Description of measurement methods and procedures to be applied	Through the review of data, it has been confirmed that the higher value of uncertainty range of IPCC default values as provided in Table 1.2 Vol. 2 of the 2006 IPCC Guidelines has been selected. The default value from IPCC 2006 as 26 TJ/kT and has been chosen for the calculations.	
	Frequency of monitoring/recording	The monitoring frequency is every update of IPCC and recording frequency is annually as verified by the verification team and therefore, confirms that the most frequent data has been used.	
Value monitored		01-September-2021 to 31-December-2021	01-January-2022 to 24-November-2022
	TJ/kt	26	26
	The value of 26 as given in MR /1/ was verified from 2006 IPCC Guidelines for National Greenhouse Gas Inventories, Volume 2: Energy, Page 1.18. and was found to be accurate. This is to be noted than the latest IPCC report of 2019 does not provide any updated value of coal NCV. Thus, the project proponent has considered the value as per the 2006 IPCC report/29/. This has been assessed to be appropriate and acceptable.		
Monitoring equipment	The value is taken from IPCC's publicly available report and it is accepted by the verification team.		
QA/QC procedures to be applied	Not applicable as IPCC data is an authentic source.		

	Purpose of the data	Calculation of Project Emissions							
	Calculation method	Not Applicable							
	Comments	As confirmed during the site audit, all the data would be achieved for a minimum of 2 years after the end of the crediting period or last verification, whichever occurs later.							
	Data / Parameter	EF _{coal,y}							
	Data unit	tCO ₂ e/TJ							
	Description	Weighted average CO ₂ emission factor of coal in the year y							
	Source of data	Verification team confirms that the data has been sourced from Table 1.2 Vol. 2 of the 2006 IPCC Guidelines							
	Description of measurement methods and procedures to be applied	Through the review of data, it has been confirmed that the Higher value of the uncertainty range of IPCC default values as provided in Table 1.4 Vol. 2 of the 2006 IPCC Guidelines has been selected. This is to be noted than the latest IPCC report of 2019 does not provide any updated value of coal emission factor. Thus, the project proponent has considered the value as per the 2006 IPCC report/29/. This has been assessed to be appropriate and acceptable.							
	Frequency of monitoring/recording	The monitoring frequency is every update of IPCC and recording frequency is annually as verified by the verification team and therefore, confirms that the most frequent data has been used.							
	Value monitored	<table><tr><td></td><td>01-September-2021 to 31-December-2021</td><td>01-January-2022 to 24-November-2022</td></tr><tr><td>tCO₂e/TJ</td><td>100</td><td>100</td></tr></table> The value of 100 as given in MR/1/ was verified from 2006 IPCC Guidelines for National Greenhouse Gas Inventories, Volume 2: Energy, Page 1.23 and the value was found to be accurate.		01-September-2021 to 31-December-2021	01-January-2022 to 24-November-2022	tCO ₂ e/TJ	100	100	
	01-September-2021 to 31-December-2021	01-January-2022 to 24-November-2022							
tCO ₂ e/TJ	100	100							
Monitoring equipment	The value is taken from IPCC's publicly available report, and it is accepted by the verification team.								
QA/QC procedures to be applied	Not applicable as IPCC data is an authentic source.								

	Purpose of the data	Calculation of Project Emissions	
	Calculation method	Not Applicable	
	Comments	As confirmed during the site audit, all the data would be achieved for a minimum of 2 years after the end of the crediting period or last verification, whichever occurs later.	
	Data / Parameter	EC _{PJ,y}	
	Data unit	MWh	
	Description	Quantity of electricity consumed by the project plant in year y	
	Source of data	Verification team confirms that the data has been measured directly by electricity consumption logbook/15/.	
	Description of measurement methods and procedures to be applied	During the site visit and through document review, it has been confirmed that the separate electricity meter would be installed for monitoring of electricity imported from state grid and electricity generated by captive diesel generator sets. Electricity consumption of the plant would be calculated as summation of the electricity imports from state grid and electricity generated by captive diesel generator sets.	
	Frequency of monitoring/recording	The monitoring frequency is continuously and recording frequency is daily as verified by the verification team through site visit assessment.	
	Value monitored		01-September-2021 to 31-December-2021
			01-January-2022 to 24-November-2022
		MWh/yr	642.21
			1,775.90
	The data was verified through electricity consumption logbook/15/. It was confirmed that DG set was not being used during monitoring period owing to the fact there was a constant electricity supply from the grid as checked from electricity invoices.		
	Monitoring equipment	Energy Meter has been used to measure the electricity consumption in the project activity, which has been confirmed during the site visit. Equipment: Energy Meter or Electricity Consumption Meter (main power supply)	

		Manufacturer: L& T-Electronic trivector ER-300 P Serial #: 11490797
		Accuracy class: 0.5S for Active, 1.0S for Reactive
	QA/QC procedures to be applied	The installation and working conditions of the meters were checked through calibration certificates /13/, latest photographs /6/ and were found to be satisfactory. During site audit, it was confirmed that the QA-QC of parameter has been ensured by timely calibration of the energy meter. The energy meter has been calibrated by Dakshin Gujarat Vij Company Ltd (DGVCL). No calibration gap has been observed as per the calibration frequency as the energy meter is a property of DGVCL thus testing is done solely by the authority based on the regulation/21/ and PP has no role to play in it. The accuracy class being 0.5S for active and 1.0S for reactive, which is as per the registered PD/3/. The information was verified by assessment team through site visit assessment.
	Purpose of the data	Calculation of Project Emissions
	Calculation method	Not Applicable as this is a directly measured parameter
	Comments	As confirmed during the site audit, all the data would be achieved for a minimum of 2 years after the end of the crediting period or last verification, whichever occurs later.
	Data / Parameter	RMP _{cement,y}
	Data unit	kT
	Description	Quantity of cement purchased for producing AAC in the year y
	Source of data	Verification team confirms that the data has been measured directly by purchase records maintained in the logbook/17/ at plant.
	Description of measurement methods and procedures to be applied	During the site visit and through the review of, it has been confirmed that the cement purchased for producing AAC blocks have been measured using weighbridge. Verification team confirms that the cement purchase records/17/ from the suppliers have been checked.
	Frequency of monitoring/recording	The monitoring frequency is every purchase of raw material and recording frequency is monthly as verified by plant logbook/17/ and during site visit assessment. The reported data has been cross-

		checked with the invoices issued to the PP by the supplier /14/.	
Value monitored		01-September-2021 to 31-December-2021	01-January-2022 to 24-November-2022
	t	12,303.03	28,853.06
	The data has been cross verified from the invoices/14/ and found to be accurate.		
Monitoring equipment	Equipment	Weighbridge	
	Manufacturer	Endeavour industries Pvt Ltd.	
	Serial no.	09201718	
	Accuracy class	III	
	Calibration date	22-September-2019 09-September-2020 24-November-2021	
	Calibration due date	23-November-2022	
QA/QC procedures to be applied	The assessment team during audit confirms that the QA-QC of parameter has been ensured by timely calibration of the weighbridge by the Legal Metrology Division, which is annual. Therefore, calibration frequency has been kept intact which could be verified from the calibration certificates/13/. Further, the accuracy of the monitoring equipment is as per the registered monitoring plan.		
	However, it has been observed that the calibration of the weighbridge was not valid for the period from 10-September-2020 to 23-November-2021. The project owner has thus applied maximum permissible error of 0.05% (for call III accuracy class weighing scale/30/) for the initial 3 months (i.e. September, October and November 2021) of the recorded values. This has been found to be appropriate by the verification team. The calculation approach in the emission reduction calculation sheet/2/ has been checked by the verification team and found to be correct.		
Purpose of the data	Calculation of Leakage Emissions		
Calculation method	Not Applicable as it is a measured parameter.		
Comments	As confirmed during the site audit, all the data would be achieved for a minimum of 2 years after the end of the crediting period or last verification, whichever occurs later.		
Data / Parameter	RMC _{cement,y}		

	Data unit	Kt												
	Description	Quantity of cement consumed for producing AAC blocks in the year y												
	Source of data	Verification team confirms that the data has been measured directly and verified through plant records												
	Description of measurement methods and procedures to be applied	During the site visit and through document review, it has been confirmed that the cement consumed for producing AAC blocks have been measured using Load cell installed at cement batcher inlet												
	Frequency of monitoring/recording	Monitoring frequency: Batch wise Recording frequency: Daily as verified by plant logbooks and during site visit assessment.												
	Value monitored	<table><tr><td></td><td>01-September-2021 to 31-December-2021</td><td>01-January-2022 to 24-November-2022</td></tr><tr><td>t</td><td>12,237.29</td><td>28,230.57</td></tr></table> Inventory has been maintained and monitored through the equation: Consumption = Opening Stock + Purchases – Closing Stock Verification team has checked the overall consumption records/stock data and Invoices from the suppliers to confirm the quantity purchased and consumed.			01-September-2021 to 31-December-2021	01-January-2022 to 24-November-2022	t	12,237.29	28,230.57					
		01-September-2021 to 31-December-2021	01-January-2022 to 24-November-2022											
	t	12,237.29	28,230.57											
Monitoring equipment	<table><tr><td>Equipment</td><td>Load Cell</td></tr><tr><td>Manufacturer</td><td>Endeavour</td></tr><tr><td>Serial no.</td><td>09201718</td></tr><tr><td>Accuracy class</td><td>III</td></tr><tr><td>Calibration date</td><td>22-September-2019 09-September-2020 24-November-2021</td></tr><tr><td>Calibration due date</td><td>23-November-2022</td></tr></table>		Equipment	Load Cell	Manufacturer	Endeavour	Serial no.	09201718	Accuracy class	III	Calibration date	22-September-2019 09-September-2020 24-November-2021	Calibration due date	23-November-2022
Equipment	Load Cell													
Manufacturer	Endeavour													
Serial no.	09201718													
Accuracy class	III													
Calibration date	22-September-2019 09-September-2020 24-November-2021													
Calibration due date	23-November-2022													
QA/QC procedures to be applied	The assessment team during site audit confirms that the QA-QC of parameter has been ensured by timely calibration of the weighbridge by the Legal Metrology Division, which is annual. Therefore, calibration frequency has been kept intact which could be verified from the calibration certificates/13/. Further, the accuracy of the monitoring equipment is as per the registered monitoring plan. However, it has been observed that the calibration of the weighbridge was not valid for the period from 10-September-2020 to 23-November-2021. The project													

		owner has thus applied maximum permissible error of 0.05% (for call III accuracy class weighing scale/30/) for the initial 3 months (i.e. September, October and November 2021) of the recorded values. This has been found to be appropriate by the verification team. The calculation approach in the emission reduction calculation sheet/2/ has been checked by the verification team and found to be correct. Site visit assessment reveal that inventorisation of data has been done efficiently and data management procedures has been followed for both hard and soft versions of data. Interview with the monitoring personnel revealed that employees were well verse of the QA/QC procedures to be followed for data monitoring. Thus, it can be concluded that all the QA/QC requirements are in place.
	Purpose of the data	Calculation of Leakage Emissions
	Calculation method	Not Applicable as it is a measured parameter.
	Comments	As confirmed during the site audit, all the data would be achieved for a minimum of 2 years after the end of the crediting period or last verification, whichever occurs later.
	Data / Parameter	$RMP_{fly\ ash,y}$
	Data unit	Kt
	Description	Quantity of fly ash purchased for producing AAC blocks in the year y
	Source of data	Verification team confirms that the data has been measured directly by purchase records maintained in the logbook/17/ at plant.
	Description of measurement methods and procedures to be applied	During the site visit and through document review, it has been confirmed that the fly ash purchased for producing AAC blocks have been measured using weighbridge.
	Frequency of monitoring/recording	The monitoring frequency is every purchase of raw material and recording frequency is monthly as verified from the plant logbook /17/ and through site visit assessment.

	Value monitored		01-September-2021 to 31-December-2021	01-January-2022 to 24-November-2022
		t	426,786.04	1,376,518.12
		The values have been verified with plant log book /17/. The reported data has been cross-checked with the invoices issued to the PP by the fly ash supplier /14/.		
	Monitoring equipment	Equipment	Weighbridge	
		Manufacturer	Endeavour industries Pvt Ltd.	
		Serial no.	09201718	
		Accuracy class	III	
		Calibration date	22-September-2019 09-September-2020 24-November-2021	
		Calibration due date	23-November-2022	
	QA/QC procedures to be applied	The assessment team during site audit confirms that the QA-QC of parameter has been ensured by timely calibration of the weighbridge by the Legal Metrology Division, which is annual. Therefore, calibration frequency has been kept intact which could be verified from the calibration certificates/13/. Further, the accuracy of the monitoring equipment is as per the registered monitoring plan.		
However, it has been observed that the calibration of the weighbridge was not valid for the period from 10-September-2020 to 23-November-2021. The project owner has thus applied maximum permissible error of 0.05% (for call III accuracy class weighing scale/30/) for the initial 3 months (i.e. September, October and November 2021) of the recorded values. This has been found to be appropriate by the verification team. The calculation approach in the emission reduction calculation sheet/2/ has been checked by the verification team and found to be correct.				
Site visit assessment reveal that inventorisation of data has been done efficiently and data management procedures has been followed for both hard and soft versions of data.				

		Interview with the monitoring personnel revealed that employees were well verse of the QA/QC procedures to be followed for data monitoring. Thus, it can be concluded that all the QA/QC requirements are in place.
	Purpose of the data	Calculation of Leakage Emissions
	Calculation method	Not Applicable as it is a measured parameter.
	Comments	As confirmed during the site audit, all the data would be achieved for a minimum of 2 years after the end of the crediting period or last verification, whichever occurs later.

Data / Parameter	RMC _{fly ash,y}		
Data unit	kt		
Description	Quantity of fly ash consumed for producing AAC blocks in the year y		
Source of data	Verification team confirms that the data has been measured directly by purchase records/14/ maintained at plant.		
Description of measurement methods and procedures to be applied	During the site visit and through document review, it has been confirmed that the fly ash consumed for producing AAC blocks have been measured using Load cell installed at fly ash batcher inlet		
Frequency of monitoring/recording	Monitoring frequency: Batch wise Recording frequency: Daily as verified from plant logbooks /17.2/ and through site visit assessment.		
Value monitored		01-September-2021 to 31-December-2021	01-January-2022 to 24-November-2022
	t	63,018.42	144849.19

Inventory has been maintained and monitored through the equation:
Consumption = Opening Stock + Purchases - Closing Stock
Verification team has checked the overall consumption records/17/, stock data and Invoices/14/ from the suppliers to confirm the quantity purchased and consumed.

	Monitoring equipment	Equipment	Load Cell
		Manufacturer	Endeavour
		Serial no.	09201718
		Accuracy class	III
		Calibration date	22-September-2019 09-September-2020 24-November-2021
		Calibration due date	23-November-2022
	QA/QC procedures to be applied	The assessment team during site audit confirms that the QA-QC of parameter has been ensured by the load cell calibrated at least annually. Fly ash purchase invoices and fly ash stocks data can be used for verification of figures. However, it has been observed that the calibration of the weighbridge was not valid for the period from 10-September-2020 to 23-November-2021. The project owner has thus applied maximum permissible error of 0.05% (for call III accuracy class weighing scale/30/) for the initial 3 months (i.e. September, October and November 2021) of the recorded values. This has been found to be appropriate by the verification team. The calculation approach in the emission reduction calculation sheet/2/ has been checked by the verification team and found to be correct. Site assessment reveal that inventorisation of data has been done efficiently and data management procedures has been followed for both hard and soft versions of data. Interview with the monitoring personnel revealed that employees were well verse of the QA/QC procedures to be followed for data monitoring. Thus, it can be concluded that all the QA/QC requirements are in place.	
		Purpose of the data	Calculation of Leakage Emissions
		Calculation method	Not Applicable as it is a measured parameter.
		Comments	As confirmed during the site audit, all the data would be achieved for a minimum of 2 years after the end of

		the crediting period or last verification, whichever occurs later.

		Division, which is annual. Therefore, calibration frequency has been kept intact which could be verified from the calibration certificates/13/. Further, the accuracy of the monitoring equipment is as per the registered monitoring plan. However, it has been observed that the calibration of the weighbridge was not valid for the period from 10-September-2020 to 23-November-2021. The project owner has thus applied maximum permissible error of 0.05% (for call III accuracy class weighing scale/30/) for the initial 3 months (i.e. September, October and November 2021) of the recorded values. This has been found to be appropriate by the verification team. The calculation approach in the emission reduction calculation sheet/2/ has been checked by the verification team and found to be correct. Site assessment reveal that inventorisation of data has been done efficiently and data management procedures has been followed for both hard and soft versions of data. Interview with the monitoring personnel revealed that employees were well verse of the QA/QC procedures to be followed for data monitoring. Thus, it can be concluded that all the QA/QC requirements are in place.
	Purpose of the data	Calculation of Leakage Emissions
	Calculation method	Not Applicable as it is a measured parameter.
	Comments	As confirmed during the site audit, all the data would be achieved for a minimum of 2 years after the end of the crediting period or last verification, whichever occurs later.
	Data / Parameter	RMC _{Lime,y}
	Data unit	kt
	Description	Quantity of lime consumed for producing AAC blocks in the year y
	Source of data	Verification team confirms that the data has been measured directly and verified through Plant records – purchase book
	Description of measurement	During the site visit and through document review, it has been confirmed that the lime consumed for

	methods and procedures to be applied	producing AAC blocks have been measured using Load cell installed at lime batcher inlet													
	Frequency of monitoring/recording	The monitoring frequency is batch wise and recording frequency is daily as verified from plant logbook/17.2/ and through site visit assessment.													
	Value monitored		01-September-2021 to 31-December-2021	01-January-2022 to 24-November-2022											
		t	4,640.87	10,662.68											
	Inventory has been maintained and monitored through the equation: Consumption = Opening Stock + Purchases – Closing Stock Verification team has checked the overall consumption records, stock data and Invoices/14/ from the suppliers to confirm the quantity purchased and consumed.														
Monitoring equipment	<table><tr><td>Equipment</td><td>Load cell</td></tr><tr><td>Manufacturer</td><td>Endeavour</td></tr><tr><td>Serial no.</td><td>09201718</td></tr><tr><td>Accuracy class</td><td>III</td></tr><tr><td>Calibration date</td><td>22-September-2019 09-September-2020 24-November-2021</td></tr><tr><td>Calibration due date</td><td>23-November-2022</td></tr></table>			Equipment	Load cell	Manufacturer	Endeavour	Serial no.	09201718	Accuracy class	III	Calibration date	22-September-2019 09-September-2020 24-November-2021	Calibration due date	23-November-2022
Equipment	Load cell														
Manufacturer	Endeavour														
Serial no.	09201718														
Accuracy class	III														
Calibration date	22-September-2019 09-September-2020 24-November-2021														
Calibration due date	23-November-2022														
QA/QC procedures to be applied	The assessment team during site audit confirms that the QA-QC of parameter has been ensured by the load cell calibrated at least annually. Lime purchase invoices and lime stocks data can be used for verification of figures. However, it has been observed that the calibration of the weighbridge was not valid for the period from 10-September-2020 to 23-November-2021. The project owner has thus applied maximum permissible error of 0.05% (for call III accuracy class weighing scale/30/) for the initial 3 months (i.e. September, October and November 2021) of the recorded values. This has been found to be appropriate by the verification team. The calculation approach in the emission reduction														

		calculation sheet/2/ has been checked by the verification team and found to be correct.	
	Purpose of the data	Calculation of Leakage Emissions	
	Calculation method	Not Applicable as it is a measured parameter.	
	Comments	As confirmed during the site audit, all the data would be achieved for a minimum of 2 years after the end of the crediting period or last verification, whichever occurs later.	
	Data / Parameter	RMP _{gypsum,y}	
	Data unit	kt	
	Description	Quantity of gypsum purchased for producing AAC blocks in the year y	
	Source of data	Verification team confirms that the data has been measured directly by purchase records maintained in the logbook/17/ at plant.	
	Description of measurement methods and procedures to be applied	During the site visit and through the review of logbook/17/, it has been confirmed that the gypsum purchased for producing AAC blocks have been measured using weighbridge.	
	Frequency of monitoring/recording	Monitoring frequency: Every purchase of raw material Recording frequency: Monthly as verified from plant logbook /17/ and through site visit assessment.	
Value monitored		01-September-2021 to 31-December-2021	01-January-2022 to 24-November-2022
	t	367.63	1068.95
	The values have been verified with plant log book /17/. The reported data has been cross-checked with the invoices issued to the PP by the supplier /14/.		
Monitoring equipment	Equipment	Weighbridge	
	Manufacturer	Endeavour industries Pvt Ltd.	
	Serial no.	09201718	
	Accuracy class	III	
	Calibration date	22-September-2019 09-September-2020	

			24-November-2021
		Calibration due date	23-November-2022
	QA/QC procedures to be applied	The assessment team during site audit confirms that the QA-QC of parameter has been ensured by timely calibration of the weighbridge by the Legal Metrology Division, which is annual. Therefore, calibration frequency has been kept intact which could be verified from the calibration certificates/13/. Further, the accuracy of the monitoring equipment is as per the registered monitoring plan. However, it has been observed that the calibration of the weighbridge was not valid for the period from 10-September-2020 to 23-November-2021. The project owner has thus applied maximum permissible error of 0.05% (for call III accuracy class weighing scale/30/) for the initial 3 months (i.e. September, October and November 2021) of the recorded values. This has been found to be appropriate by the verification team. The calculation approach in the emission reduction calculation sheet/2/ has been checked by the verification team and found to be correct. Site assessment reveal that inventorisation of data has been done efficiently and data management procedures has been followed for both hard and soft versions of data. Interview with the monitoring personnel revealed that employees were well verse of the QA/QC procedures to be followed for data monitoring. Thus, it can be concluded that all the QA/QC requirements are in place.	
	Purpose of the data	Calculation of Leakage Emissions	
	Calculation method	Not Applicable as it is a measured parameter.	
	Comments	As confirmed during the site audit, all the data would be achieved for a minimum of 2 years after the end of the crediting period or last verification, whichever occurs later.	
	Data / Parameter	RMC _{gypsum,y}	
	Data unit	kT	

	Description	Quantity of gypsum consumed for producing AAC blocks in the year y												
	Source of data	Verification team confirms that the data has been measured directly and verified through Plant records – purchase book												
	Description of measurement methods and procedures to be applied	During the site visit and through consumption records/17/, it has been confirmed that the gypsum consumed for producing AAC blocks have been measured using Load cell installed at lime batcher inlet												
	Frequency of monitoring/recording	Monitoring frequency: Every purchase of raw material Recording frequency: Monthly as verified from plant logbook/17/ and through site assessment.												
	Value monitored	<table><tr><td></td><td>01-September-2021 to 31 -December-2021</td><td>01-January-2022 to 24-November-2022</td></tr><tr><td>t</td><td>391.96</td><td>956.18</td></tr></table> Inventory has been maintained and monitored through the equation: Consumption = Opening Stock + Purchases – Closing Stock Verification team has checked the overall consumption records/17/ and Invoices/14/ from the suppliers to confirm the quantity purchased and consumed.			01-September-2021 to 31 -December-2021	01-January-2022 to 24-November-2022	t	391.96	956.18					
		01-September-2021 to 31 -December-2021	01-January-2022 to 24-November-2022											
	t	391.96	956.18											
Monitoring equipment	<table><tr><td>Equipment</td><td>Weighbridge</td></tr><tr><td>Manufacturer</td><td>Endeavour industries Pvt Ltd.</td></tr><tr><td>Serial no.</td><td>09201718</td></tr><tr><td>Accuracy class</td><td>III</td></tr><tr><td>Calibration date</td><td>22-September-2019 09-September-2020 24-November-2021</td></tr><tr><td>Calibration due date</td><td>23-November-2022</td></tr></table>		Equipment	Weighbridge	Manufacturer	Endeavour industries Pvt Ltd.	Serial no.	09201718	Accuracy class	III	Calibration date	22-September-2019 09-September-2020 24-November-2021	Calibration due date	23-November-2022
Equipment	Weighbridge													
Manufacturer	Endeavour industries Pvt Ltd.													
Serial no.	09201718													
Accuracy class	III													
Calibration date	22-September-2019 09-September-2020 24-November-2021													
Calibration due date	23-November-2022													
QA/QC procedures to be applied	The assessment team during site audit confirms that the QA-QC of parameter has been ensured the load cell calibrated at least annually. Gypsum purchase invoices and gypsum stocks data can be used for verification of figures.													

		However, it has been observed that the calibration of the weighbridge was not valid for the period from 10-September-2020 to 23-November-2021. The project owner has thus applied maximum permissible error of 0.05% (for call III accuracy class weighing scale/30/) for the initial 3 months (i.e. September, October and November 2021) of the recorded values. This has been found to be appropriate by the verification team. The calculation approach in the emission reduction calculation sheet/2/ has been checked by the verification team and found to be correct.						
	Purpose of the data	Calculation of Leakage Emissions						
	Calculation method	Not Applicable as it is a measured parameter.						
	Comments	As confirmed during the site audit, all the data would be achieved for a minimum of 2 years after the end of the crediting period or last verification, whichever occurs later.						
	Data / Parameter	RMP _{aluminium,y}						
	Data unit	kt						
	Description	Quantity of aluminium purchased for producing AAC blocks in the year y						
	Source of data	Verification team confirms that the data has been measured directly by purchase records maintained in the logbook/17/ at plant.						
	Description of measurement methods and procedures to be applied	plant.						
	Description of measurement methods and procedures to be applied	During the site visit and through the review of logbook/17/, it has been confirmed that the aluminium powder purchased for producing AAC blocks have been measured using weighbridge.						
	Frequency of monitoring/recording	The monitoring frequency is every purchase of raw material as verified from plant logbook/17/ and through site assessment.						
	Value monitored	<table border="1"> <tr> <td></td><td>01-September-2021 to 31-December-2021</td><td>01-January-2022 to 24-November-2022</td></tr> <tr> <td>t</td><td>64.20</td><td>116.16</td></tr> </table> The values have been verified with plant log book /17/. The reported data has been cross-checked with the invoices issued to the PP by the supplier /14/.		01-September-2021 to 31-December-2021	01-January-2022 to 24-November-2022	t	64.20	116.16
	01-September-2021 to 31-December-2021	01-January-2022 to 24-November-2022						
t	64.20	116.16						

	Monitoring equipment	Electronic weighbridge has been used to measure the parameter (FCC _{coal,y}).												
		<table><tr><td>Equipment</td><td>Weighbridge</td></tr><tr><td>Manufacturer</td><td>Endeavour industries Pvt Ltd.</td></tr><tr><td>Serial no.</td><td>09201718</td></tr><tr><td>Accuracy class</td><td>III</td></tr><tr><td>Calibration date</td><td>22-September-2019 09-September-2020 24-November-2021</td></tr><tr><td>Calibration due date</td><td>23-November-2022</td></tr></table>	Equipment	Weighbridge	Manufacturer	Endeavour industries Pvt Ltd.	Serial no.	09201718	Accuracy class	III	Calibration date	22-September-2019 09-September-2020 24-November-2021	Calibration due date	23-November-2022
	Equipment	Weighbridge												
Manufacturer	Endeavour industries Pvt Ltd.													
Serial no.	09201718													
Accuracy class	III													
Calibration date	22-September-2019 09-September-2020 24-November-2021													
Calibration due date	23-November-2022													
	QA/QC procedures to be applied	The assessment team during site audit confirms that the QA-QC of parameter has been ensured by timely calibration of the weighbridge by the Legal Metrology Division, which is annual. Therefore, calibration frequency has been kept intact which could be verified from the calibration certificates/13/. Further, the accuracy of the monitoring equipment is as per the registered monitoring plan. However, it has been observed that the calibration of the weighbridge was not valid for the period from 10-September-2020 to 23-November-2021. The project owner has thus applied maximum permissible error of 0.05% (for call III accuracy class weighing scale/30/) for the initial 3 months (i.e. September, October and November 2021) of the recorded values. This has been found to be appropriate by the verification team. The calculation approach in the emission reduction calculation sheet/2/ has been checked by the verification team and found to be correct. Site assessment reveal that inventorisation of data has been done efficiently and data management procedures has been followed for both hard and soft versions of data. Interview with the monitoring personnel revealed that employees were well verse of the QA/QC procedures to be followed for data monitoring. Thus, it can be concluded that all the QA/QC requirements are in place.												
	Purpose of the data	Calculation of Leakage Emissions												

	Calculation method	Not Applicable as it is a measured parameter.	
	Comments	As confirmed during the site audit, all the data would be achieved for a minimum of 2 years after the end of the crediting period or last verification, whichever occurs later.	
	Data / Parameter	RMC _{aluminium,y}	
	Data unit	Kt	
	Description	Quantity of aluminium consumed for producing AAC blocks in the year y	
	Source of data	Verification team confirms that the data has been measured directly and verified through Plant records – purchase book	
	Description of measurement methods and procedures to be applied	During the site visit and through document review/17/, it has been confirmed that the aluminium powder consumed for producing AAC blocks have been measured using Load cell installed at lime batcher inlet	
	Frequency of monitoring/recording	The monitoring frequency is every purchase of raw material as verified by from plant logbook/17/ and through site assessment.	
	Value monitored		01-September-2021 to 31-December-2021
			01-January-2022 to 24-November-2022
		t	50.34
			113.05
	Inventory has been maintained and monitored through the equation:		
	Consumption = Opening Stock + Purchases – Closing Stock		
	Verification team has checked the overall consumption records/17/, Invoices/14/ from the suppliers to confirm the quantity purchased and consumed.		
	Monitoring equipment	Electronic weighbridge has been used to measure the parameter (FCC _{coal,y}).	
		Equipment	Load Cell
		Manufacturer	Endeavour
		Serial no.	09201718
		Accuracy class	III

		Calibration date	22-September-2019 09-September-2020 24-November-2021
		Calibration due date	23-November-2022
	QA/QC procedures to be applied	The assessment team during site audit confirms that the QA-QC of parameter has been ensured the load cell calibrated at least annually. Aluminium powder purchase invoices and aluminium powder stocks data can be used for verification of figures. However, it has been observed that the calibration of the weighbridge was not valid for the period from 10-September-2020 to 23-November-2021. The project owner has thus applied maximum permissible error of 0.05% (for call III accuracy class weighing scale/30/) for the initial 3 months (i.e. September, October and November 2021) of the recorded values. This has been found to be appropriate by the verification team. The calculation approach in the emission reduction calculation sheet/2/ has been checked by the verification team and found to be correct.	
	Purpose of the data	Calculation of Leakage Emissions	
	Calculation method	Not Applicable as it is a measured parameter.	
	Comments	As confirmed during the site audit, all the data would be achieved for a minimum of 2 years after the end of the crediting period or last verification, whichever occurs later.	
	Data / Parameter	$D_{r,y}$	
	Data unit	Km	
	Description	Return trip road distance between the origin and destination of freight transportation activity f in monitoring period m	
	Source of data	Verification team confirms that the data has been measured online maps and purchase invoices/14/ maintained at plant.	
	Description of measurement methods and	During the site inspection, it has been confirmed that this data has been measured using online maps and	

	procedures to be applied	purchase invoices. Verification team has cross-checked the distance between origin and destination was using google earth/26/.	
	Frequency of monitoring/recording	The monitoring frequency and recording frequency is whenever road trip distance changes as verified by the verification team through site assessment.	
	Value monitored	Raw Material	Round trip distance
		Cement	139
		Fly ash	43
		Lime	980
		Gypsum	603
		Aluminium powder	894
		Coal	709
	The values were verified with purchase invoices /14/. This was further cross checked against online maps used to estimate roundtrip distance between mentioned places. Raw material destination and origin has been cross checked during site audit against purchase invoices.		
	Monitoring equipment	Purchase invoices and online maps has been used to estimate the roundtrip distance and it is accepted by the verification team.	
	QA/QC procedures to be applied	Not applicable as it is a third-party data.	
	Purpose of the data	Calculation of leakage emissions	
	Calculation method	Roundtrip road travel distances calculated from online maps	
	Comments	As confirmed during the site audit, all the data would be achieved for a minimum of 2 years after the end of the crediting period or last verification, whichever occurs later.	
	Data / Parameter	FR _{f,m}	
	Data unit	Tonne	
	Description	Total mass of freight transported in freight transportation activity f in monitoring period m	

	Source of data	Verification team confirms that the data has been measured directly by purchase records/14/ maintained at plant.			
	Description of measurement methods and procedures to be applied	During the site visit and through document review, it has been confirmed that this parameter has been measured through Raw material purchase invoices/14/. Raw materials include (cement, fly ash, limestone, gypsum & aluminium powder).			
	Frequency of monitoring/recording	The monitoring frequency is continuously and recording frequency is monthly as verified by the verification team through site assessment.			
	Value monitored	Parameters	Unit	Year 2021	Year 2022
		D _{cement}	t	12,303.03	28,853.06
		D _{Flyash}	t	426,786.04	13,76,518.12
		D _{lime}	t	4,749.84	11,211.69
		D _{Gypsum}	t	367.63	1068.95
		D _{Al. Powder}	t	64.20	116.16
		D _{coal}	t	2,505.62	7,599.22
Monitoring equipment	3rd party purchase invoices/14/ have been used to ascertain this the parameter and were verified by the verification team.				
QA/QC procedures to be applied	Not applicable as it is a third-party data.				
Purpose of the data	Calculation of leakage emissions				
Calculation method	Not applicable as it is a measured parameter.				
Comments	As confirmed during the site audit, all the data would be achieved for a minimum of 2 years after the end of the crediting period or last verification, whichever occurs later.				
Data / Parameter	The vehicle class used				
Data unit	-				
Description	The vehicle class used for freight transportation				

	Source of data	Verification team confirms that the data has been measured directly by transportation records/16/ maintained at plant.
	Description of measurement methods and procedures to be applied	During the site visit and through document review/16/, it has been confirmed that the Vehicle type (light/heavy) used for raw material transportation has been monitored based on road challan for raw material transported during each transportation activity.
	Frequency of monitoring/recording	The monitoring frequency is continuously and recording frequency is through every receipt of raw materials at site as verified by the verification team through site assessment.
	Value monitored	From the purchase records/14/, it has been found that the raw materials have been transported in heavy vehicles. The project proponent has considered the emission factor applicable for the heavy vehicle i.e. 129 gCO₂/t-km. Light Motor Vehicles (LMH) in India is categorised as the vehicles with capacity up to 3.5 tons use, ideal for urban and intra-city transport, these trucks are used for deliveries of goods like groceries, packages, and small furniture items/18/. It has been observed that the vehicles used for transportation of the raw materials during the current monitoring period heavy vehicles. This has been verified from the invoices/receipts of the raw materials/14/ which mention load transported by the vehicles. Thus, the verification concludes that the vehicle category has been selected correctly for the emission reduction calculation.
	Monitoring equipment	Weigh bills and UNFCCC guidelines are 3rd party sources of data and it is accepted by the verification team.
	QA/QC procedures to be applied	Not applicable as it is a third-party data.
	Purpose of the data	Calculation of leakage emissions
	Calculation method	Not applicable as it is a measured parameter.
	Comments	As confirmed during the site audit, all the data would be achieved for a minimum of 2 years after the end of the crediting period or last verification, whichever occurs later.

	Data / Parameter	D _{G,y}										
	Data unit	Litre										
	Description	Quantity of Diesel consumed in the plant in the year y										
	Source of data	Consumption Records										
	Description of measurement methods and procedures to be applied	Quantities of diesel consumed are monitored based on diesel consumed and filled in the DG set. The quantity is measured by using measuring can/drums by the site team. The values are recorded in the log books/17/ for consumption record which were verified during onsite verification and found appropriate.										
	Frequency of monitoring/recording	Monitoring frequency: Batch wise Recording frequency: Monthly										
	Value monitored	<table border="1"> <tr> <td></td> <td>01-September-2021 to 31-December-2021</td> <td>01-January-2022 to 24-November-2022</td> </tr> <tr> <td>Unit</td> <td></td> <td></td> </tr> <tr> <td>Litre</td> <td>15,000</td> <td>27,950</td> </tr> </table>			01-September-2021 to 31-December-2021	01-January-2022 to 24-November-2022	Unit			Litre	15,000	27,950
		01-September-2021 to 31-December-2021	01-January-2022 to 24-November-2022									
	Unit											
	Litre	15,000	27,950									
	Monitoring equipment	Measuring can / Drums are used to fill diesel										
	QA/QC procedures to be applied	Purchase invoices/14/ submitted by the project proponent were verified and found appropriate.										
Purpose of the data	Calculation of project emissions											
Calculation method	Not applicable as it is a measured parameter.											
Comments	As confirmed during the site audit, all the data would be achieved for a minimum of 2 years after the end of the crediting period or last verification, whichever occurs later.											
The calculation of baseline emissions is as below: <u>Baseline emissions:</u> Baseline emissions are quantified in line with paragraph 15 of the methodology AMS- III.Z /10/ Fuel Switch, process improvement and energy efficiency in brick manufacture (Version 06) as follows: $BE_y = EF_{BL} * P_{PJ,y}$												

Where:

BE_y	tCO_2e	The annual baseline emissions from fossil fuels displaced by the project activity in the year y
EF_{BL}	tCO_2/m^3	The annual production specific baseline emission factor
$P_{PJ,y}$	m^3	The annual net production of the facility in year y

For the project activity

Annual Net Production of the facility from 01-September-2021 to 31-December-2021 =113,961.24 m^3

Annual Net Production of the facility from 01-January-2022 to 24-November-2022 = 262,454.40 m^3

Specific Baseline Emission Factor=0.3993 tCO_2/m^3

As per Equation No.1 Baseline Emissions for the aforesaid monitoring period has been calculated as:

Year		2021	2022
$P_{PJ,y}$: net production of the facility	m^3	94967.70	218712.00
EF_{BL} : Baseline emission factor	tCO_2e/m^3	0.3993	0.3993
BE_y	tCO_2e	37,920	87,331

Baseline Emission (BE_y) for the current monitoring period is 125,251 tCO_2e (Project participant is going to claim 125,251 tCO_2e considering the production capacity of 300,000 m^3).

As explained above, the initial (registered) production capacity of the AAC block manufacturing plant was 300,000 cubic meter per annum which has been increased to 360,000 cubic meters per annum w.e.f 19-February-2021. This was done by the project proponent to meet the growing demand of AAC blocks in the region. The production capacity intimation letter submitted by the project proponent/24/ has been reviewed and found to be appropriate. The project proponent has sought approval of this deviation in line with paragraph 3.21 of the VCS standard/4. The detail assessment on the same is included in section 3.2 of the verification report.

The project proponent has applied an alternate approach to account the emission reduction to corresponding to the original capacity, 300,000 cubic meter per annum in stead of the increased capacity, i.e. 360,000 cubic meter per annum. The project proponent has apportioned the production based on the actual PLF realized in the monitoring period (with 360,000 cubic meter per annum capacity). The monthly PLF values calculated based on 360,000 cubic meter per annum are applied with the original capacity as per registered PD/3/, 300,000 cubic meter per annum. This has been found to be appropriate and acceptable by the

verification team. Further, when the production quantity of the AAC block has been considered based on apportionment approach to account the production corresponding to the original capacity for baseline emission calculation, the project emission and leakage emission has been calculated based on the entire quantities of consumable items based on the increased capacity of 3,60,000 cubic meter per annum. This has been found to be conservative and acceptable being in line with paragraph 3.21.3 of the project standard/4/ which requires the project not to claim additional emission reduction resulting from a project description deviation.

Project emissions

Project emission sources relevant for this project are:

- Project emissions from electricity consumption within the project boundary.
- Project emissions from coal consumption in the boiler for steam generation.
- Project emissions from diesel consumption in the DG set within project boundary.

Thus, Project Emission (PE_y) = $PE_{elec, y} + PE_{Coal, y} + PE_{Diesel, y}$

Project emission from electricity consumption within the project_boundary:

Referring to, “Tool to calculate baseline, project and/or leakage emission from electricity consumption,” version no. 02 the project emission from electricity consumption has been calculated as follows:

$$PE_{elec,y} = \sum_j EC_{PJ,j,y} * EF_{EL,j,y} * (1 + TDL_{j,y})$$

$PE_{elec,y}$	tCO ₂ /yr	Project emission due to electricity consumption in year y
$EC_{PJ,j,y}$	MWh/yr	Quantity of electricity consumed by the project emission source j in year y
$EF_{EL,j,y}$	tCO ₂ /MWh	Emission factor for electricity generation for source j in year y
$TDL_{j,y}$	%	Average technical transmission and distribution losses for providing electricity to source j in year y

For the project activity

Quantity of electricity consumed by the project activity from 01-September-2021 to 31-December-2021 =642.21 MWh

Quantity of electricity consumed by the project activity from 01-January-2022 to 24-November-2022 = 1,755.90 MWh

Emission factor for electricity generation for source j in year y=1.3

Average technical transmission and distribution losses for providing electricity to project=20%

As per the equation mentioned above

Period	Electricity Consumption ($EC_{PL,i,y}$)	Emission Factor ($EF_{EL,i,y}$)	Project Emission ($PE_{elec,y}$)
	MWh	tCO ₂ /MWh	tCO ₂
01-September-2021 to 31-December-2021	642.21	1.3	1,002
01-January-2022 to 24-November-2022	1,775.90	1.3	2,771

Project emissions from coal consumption in the boiler for steam generation:

As per the tool, CO₂ emissions from fossil fuels combustion are calculated based on quantity of fuels combusted and the CO₂ emission co-efficient of these fuels.

The applicable equation is:

$$PE_{FC,j,y} = \sum_i FC_{i,j,y} \times COEF_{i,y}$$

Where,

- $PE_{FF,y}$ Are the CO₂ emissions from fossil fuel combustion in process j during the year y (tCO₂/yr)
- $FC_{i,y}$ Is the quantity of fuel type i combusted in process j during the year y (mass or volume unit/yr)
- $COEF_{i,y}$ Is the CO₂ emission coefficient of fuel type i in year y (tCO₂/mass or volume unit)

As per the tool, the CO₂ emission coefficient can be calculated using one of the options, depending on the availability of data.

- Option A: Based on the chemical composition of the fossil fuel type i
- Option B: Based on the net calorific value and the CO₂ emission factor of the fuel type i.

Based on availability of data, Option B has been used to calculate the CO₂ emission co-efficient as follows:

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

Where:

- $COEF_{i,y}$ Is the CO₂ emission coefficient of fuel type i in year y (tCO₂/mass or volume unit)
- $NCV_{i,y}$ Is the weighted average net calorific value of the fuel type i in year y (GJ/mass or volume unit)
- $EF_{i,y}$ Is the weighted average CO₂ emission factor of fuel type i in year y (tCO₂/GJ)

$$PE_{\text{Coal},y} = FC_{\text{Coal},y} \times COEF_{\text{Coal},y}$$

$$COEF_{\text{Coal},y} = NCV_{\text{Coal},y} \times EF_{\text{Coal},y}$$

For the project activity:

Period	Coal Consumption	Weighted average net calorific value of coal	Weighted average CO2 emission factor of coal	Project Emissions from Coal Consumption
	kt	TJ/kt	tCO ₂ /TJ	tCO ₂
01-September-2021 to 31-December-2021	3.12	26	100	8,111
01-January-2022 to 24-November-2022	7.44	26	100	19,352

Project emissions from diesel consumption in the DG set within project boundary

As per the project emissions tool calculation, CO₂ emission from fossil fuels combustion is calculated based on quantity of fuels combusted and the CO₂ emission co-efficient of these fuels.

The applicable equation is:

$$PE_{FC,j,y} = \sum_i FC_{i,j,y} \times COEF_{i,y}$$

Where:

- PE_{FF,y} Are the CO₂ emissions from fossil fuel combustion in process j during the year y (tCO₂/yr)
- FC_{i,y} Is the quantity of fuel type i combusted in process j during the year y (mass or volume unit/yr)
- COEF_{i,y} Is the CO₂ emission coefficient of fuel type i in year y (tCO₂/mass or volume unit)

As per the tool, the CO₂ emission coefficient can be calculated using one of the options, depending on the availability of data.

- Option A: Based on the chemical composition of the fossil fuel type i
- Option B: Based on the net calorific value and the CO₂ emission factor of the fuel type i.

Based on availability of data, Option B has been used to calculate the CO₂ emission co-efficient as follows:

$$COEF_{i,y} = NCV_{i,y} \times EF_{CO_2,i,y}$$

Where:

COEF _{i,y}	Is the CO ₂ emission coefficient of fuel type i in year y (tCO ₂ /mass or volume unit)
NCV _{i,y}	Is the weighted average net calorific value of the fuel type i in year y (GJ/mass or volume unit)
EF _{i,y}	Is the weighted average CO ₂ emission factor of fuel type i in year y (tCO ₂ /GJ)

$$PE_{\text{Diesel},y} = DG_y * COEF_{\text{Diesel},y} * \text{Density of Diesel}$$

$$COEF_{\text{Diesel},y} = NCV_{\text{Diesel},y} * EF_{\text{Diesel},y}$$

PE _{Diesel,y}	tCO ₂ e/yr	Project emissions due to Diesel consumption in year y
DG _y	TJ/Gg	Quantity of Diesel consumed by the project emission source j in year y
COEF _{Diesel,y}	tCO ₂ e/TJ	Emission factor for Diesel generation for source j in year y
Density of Diesel	KG/litres	Density of Diesel

Using equation above

Period	Diesel Consumption	Weighted average net calorific value of Diesel	Weighted average CO ₂ emission factor of Diesel	Project Emissions from Diesel Consumption
	Liters	TJ/Gg	tCO ₂ /TJ	tCO ₂
01-September-2021 to 31-December-2021	15,000	43.3	74.1	41
01-January-2022 to 24-November-2022	27,950	43.3	74.1	77

Total Project Emissions (PE_y) for the current monitoring period has been tabulated below:

Period	Project Emissions from electricity consumption within the project boundary	Project Emissions from Coal Consumption	Project Emissions from Diesel Consumption	Total Project Emissions from the Project Activity
	tCO ₂	tCO ₂	tCO ₂	tCO ₂

	01-September-2021 to 31-December-2021	1,002	8,111	41	9,154
	01-January-2022 to 24-November-2022	2,771	19,352	77	22,200

Leakage:

Leakage emission sources relevant for this project are:

- Leakage emissions due to raw material production
- Leakage emission due to raw material transportation
- Leakage emissions due to raw material production

Leakage emission due to raw material production has been calculated based on the formula:

$$LE_{rm, prod, y} = RMC_{cement, y} * COEF_{cement} * RMC_{lime, y} * COEF_{lime} * RMC_{gypsum, y} * COEF_{gypsum} + RMC_{aluminium, y} * COEF_{aluminium}$$

Where:

$LE_{rm, prod, y}$	tCO ₂	Leakage emission from raw material production in the year y
$RMC_{cement, y}$	kt	Quantity of cement consumed for producing AAC blocks in the year y
$COEF_{cement}$	tCO ₂ /kt	CO ₂ emission factor of cement production
$RMC_{lime, y}$	kt	Quantity of lime consumed for producing AAC blocks in the year y
$COEF_{lime}$	tCO ₂ /kt	CO ₂ emission factor of lime production
$RMC_{gypsum, y}$	kt	Quantity of gypsum consumed for producing AAC blocks in the year y
$COEF_{gypsum}$	tCO ₂ /kt	CO ₂ emission factor of gypsum production
$RMC_{aluminium, y}$	kt	Quantity of aluminium powder consumed for producing AAC blocks in the year y
$COEF_{aluminium}$	tCO ₂ /kt	CO ₂ emission factor of aluminium production

For the project activity:

Period	Freight Type	Raw Material consumed	Specific GHG Emissions
01-September-2021 to 31-December-2021	Raw Material	Tonnes	tCO ₂ /tonne of raw material
	Cement	12,237.29	0.638
	Lime	4,640.87	0.75
	Gypsum	391.96	0.01
	Al.Powder	50.34	1.7
01-January-2022 to 24-November-2022	Cement	28,230.57	0.638
	Lime	10,662.68	0.75

	Gypsum	956.18	0.01
	Al.Powder	113.05	1.7

Leakage emissions due to raw material transportation:

Leakage emission due to raw material transportation has been calculated based on the formula Where:

$$LE_{rm,trans,y} = \sum_f D_{f,y} * FR_{f,y} * EF_{CO2,f} * 10^{-6}$$

For the project activity

$LE_{rm,trans,y}$	tCO ₂	Leakage emission from road transportation of freight in monitoring period m
$D_{f,y}$	km	Return trip road distance between the origin and destination of freight transportation activity f in monitoring period m
$FR_{f,m}$	tonne	Total mass of freight transported in freight transportation activity f in monitoring period m
$EF_{CO2,f}$	gCO ₂ /t-km	Default CO ₂ emission factor for freight transportation activity f
F	km	Freight transportation activities conducted in the project activity in monitoring period m

Period	Freight Type	Raw Material Transported	Total Round trip distance	Default CO2 Emission Factor for Freight Transportation activity
01-September-2021 to 31-December-2021	Raw Material	Tonnes	Kms	gCO ₂ /t-km
	Cement	12,303.03	139	129
	Fly ash	426,786.04	43	129
	Lime	4,749.84	980	129
	Gypsum	367.63	603	245
	Al.Powder	64,200	894	245
	Coal	2,505.62	709	129
01-January-2022 to 24-November-2022	Cement	28,853.06	139	129
	Fly ash	1,376,518.12	43	129
	Lime	11,211.69	980	129
	Gypsum	1,068.95	603	245
	Al.Powder	116,160	894	245
	Coal	7,599.22	709	129

Total Leakage Emissions (LE_y) for the monitoring has been tabulated below

	Period	Leakage Emissions from Raw Material Production	Leakage Emissions from Raw Material Transportation	Total Leakage Emissions from the Project Activity
		tCO ₂	tCO ₂	tCO ₂
	01-September-2021 to 31-December-2021	11,374	3,487	14,865
	01-January-2022 to 24-November-2022	26,210	10,449	36,659
	According to the applied methodology /10/, the conservativeness of the achieved emission reduction was checked and the detailed emission reduction calculation has been transparently provided in the ER sheet /2/. All the formulae and the calculation procedure were checked by the verification team. In the opinion of verification team, the assumptions, emission factors and default values that were applied in the calculations have been justified. Also, the verification team confirms that there were no manual transposition errors between the data sets in the ER Sheet/2/ during the current monitoring period.			
Findings	CAR 01, CAR 02, CAR 03 and CAR 04 were raised and closed successfully.			
Conclusion	The verification team concludes that, • The monitoring plan has been implemented as per the registered PD /3/; • The monitoring complies with the requirement of the applied methodology/10/; • The information inflow (from data generation, aggregation, to recording, calculation and reporting) is included above under each parameter and confirms to the requirement of the registered VCS PD /3/; • The values included in the monitoring report /1/ and corresponding emission reduction sheet /2/ are verified and included under each monitoring parameter, wherever appropriate.			

4.4 Quality of Evidence to Determine Reductions and Removals

All relevant documents were checked to assess the correctness and quality of data submitted by the project participants, which are used to determine emission reductions. A total of -13.72% decrease in overall emission reduction achieved during the current monitoring period.

All records needed for monitoring are archived in line with the requirements of the registered monitoring plan /3/. No significant lack of evidence and missing data were detected during onsite audit discussion and video inspection /11/. Hence, the verification team confirms that the monitoring system ensures required quality of the monitoring system to ensure the quality of the monitored data. All internal data are subjected to QA/QC measures. The monitoring parameters have been measured / determined without material misstatements and is in line with all applicable standards and relevant requirements. The information inflow (from data generation, aggregation, to recording, calculation and reporting) is included in section 4.1 under each parameter and confirms to the requirement of the registered VCS PD /3/. The data is then reported annually on the VCS Monitoring Report as verified by the verification team.

It was also verified through site audit inspection that the plant's team involved in the monitoring of project activity is well experienced. Hence, the verification team concludes that competent staff is employed by the project proponent to carry out the relevant tasks with sufficient accuracy. Furthermore, it was confirmed during site audit discussion that internal training program for the monitoring staff is conducted on regular basis.

4.5 Non-Permanence Risk Analysis

Not Applicable for the project activity.

5 VERIFICATION OPINION

5.1 Verification Summary

RINA Services S.p.a. has been commissioned by 'EKI ENERGY SERVICES LIMITED.' to perform verification of its registered VCS project 'AAC BLOCKS PROJECT BY MOHIT INDUSTRIES LIMITED' for the monitoring period 01-September-2021 to 24-November-2022 (Inclusive of both days), under the crediting period 25-November-2012 to 24-November-2022, with regard to the relevant requirements of VCS Standard Version 4.7/4/.

The management of the 'EKI ENERGY SERVICES LIMITED.' is responsible for the preparation of the GHG emissions data and the reported GHG emissions reductions on the basis set out within the project final Monitoring Report Version 02 and dated 20-September-2024. The calculation and determination of GHG emission reductions from the project is the responsibility of the management of the 'EKI ENERGY SERVICES LIMITED.'. The development and maintenance of records and reporting procedures are in accordance with the Monitoring Report Version 02 dated 20-September-2024.

It is our responsibility to express an independent GHG verification opinion on the GHG emissions and on the calculation of GHG emission reductions from the project for the period 01-September-2021 to 24-November-2022 (Inclusive of both days) based on the reported emission reductions in the final Monitoring Report Version 02 dated 20-September-2024 for the same period.

As a result of the verification, the verification team confirms that:

- All operations of the project are implemented and installed as planned and described in the project description.
- The monitoring system is in place and functional.
- The installed equipment essential for generating emission reductions runs reliably.
- The GHG emission reductions are calculated without material misstatements in a conservative and appropriate manner.

Based on an understanding of the risks associated with reporting GHG emissions data and the controls in place to mitigate these, RINA planned and performed our 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

5.2 Verification Conclusion

Verification period: From 01-September-2021 to 24-November-2022

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

Vintage period	Baseline emissions (tCO ₂ e)	Project emissions (tCO ₂ e)	Leakage emissions (tCO ₂ e)	Reduction VCUs (tCO ₂ e)	Removal VCUs (tCO ₂ e)	Total VCUs (tCO ₂ e)
01-September-2021–31-December-2021	37,920	9154	14865	13,901	0	13,901
01-January-2022– 24-	87,331	22200	36659	28,472	0	28,472

November-2022						
Total	125,251	31,354	51,524	42,373	0	42,373

5.3 Ex-ante vs Ex-post ERR Comparison

Vintage period	Ex-ante estimated reductions/removals	Achieved reductions/removals	Percent difference	Explanation for the difference
01-September-2021–31-December-2021	13,353	13,901	4.11%	Related to the business activities (Higher production than expected)
01-January-2022– 24-November-2022	35,899	28,472	-20.69%	
Total	49,252	42,373	-13.97%	

APPENDIX 1: COMMERCIALLY SENSITIVE INFORMATION

Not Applicable

Section	Information	Justification	Assessment method and conclusion
Not Applicable	Not Applicable	Not Applicable	Not Applicable

APPENDIX 2: DOCUMENT REFERENCES

/1/	Monitoring Report, Version 01, dated 01-July-2023 (Initial Version) Monitoring Report, Version 02 dated 20-September-2024 (intermediate Version) Monitoring Report, Version 03 dated 17-June-2025 (intermediate Version) Monitoring Report, Version 04 dated 29-September-2025 (Intermediate Version) Monitoring Report, Version 05 dated 17-December-2025 (Final Version)
/2/	Emission Reduction calculation sheet, Version 01 dated 01-July-2023 (corresponding to initial Version of VCS MR) Emissions Reduction calculation Sheet, 02 dated 20-September-2024 (corresponding to intermediate Version of VCS MR) Emissions Reduction calculation Sheet, 03 dated 17-June-2025 (corresponding to intermediate Version of VCS MR) Emissions Reduction calculation Sheet, 04 dated 29-September-2025 (corresponding to final Version of VCS MR)
/3/	- Registered VCS-PD version 2 dated 24-November-2014 - VCS Validation report dated 24-November-2014 - Monitoring report of previous monitoring report dated 06-December-2021 - Verification report of previous monitoring period dated 09-February-2022 - Verra Registry link: https://registry.verra.org/app/projectDetail/VCS/1238
/4/	VCS Standard Version 4.7
/5/	VCS Program guide Version 4.3
/6/	Technical specifications/photographs
/7/	Single line diagram and meter location / Layout
/8/	Shutdown/Breakdown records
/9/	Commissioning Certificate/Consent
/10/	AMS-III.Z: Fuel Switch, process improvement and energy efficiency in brick manufacture --- Version 4
/11/	Site visit (17-August-2023) for verification of measuring and monitoring procedure, - Video recordings & snapshots of the project site/equipment's - Interviews and data/log review

/12/	• QA/QC Manual, Quality Assurance plan, monitoring manual • Training Manual along with Training records • Emergency Action plan • Air quality monitoring records
/13/	Calibration Certificates for monitoring equipment (weighbridge, energy meter)
/14/	Purchase invoices for raw material /Invoices for blocks sold, Diesel purchase records
/15/	Electricity consumption logbook data Electricity import invoices for the entire monitoring period
/16/	Transportation records
/17/	• Logbook records for production of facility and stocks data • Logbook records for procurement and consumption of coal, diesel, cement, lime, fly ash, aluminum powder for the entire monitoring period
/18/	• Third Party (Civil Engineering Testing and Consultancy Services) block density and compressive strength report for the entire monitoring period • Internal test reports for block density by PP
/19/	Company name change evidence- Copy of Decision by Gujarat High court, Ref No. O/8588-8589/2016, dated 15-March-2016.
/20/	Copy of grievance register
/21/	Central Electricity Authority (Installation and Operation of Meters) Regulations- 2006
/22/	Declaration/undertaking for no double counting and participation under other GHG programs, no double claiming with emissions trading programs or binding emission limits and no double claiming with other forms of environmental credit.
/23/	Official registry website of Clean Development Mechanism https://cdm.unfccc.int/Projects/projsearch.html Official registry website of Gold Standard https://www.goldstandard.org/ Official registry website of Global Carbon Council https://www.globalcarboncouncil.com/ Official REC registry of India. https://www.recregistryindia.nic.in/index.php/publics/registered_regens Official website of Big Block Construction Limited https://bigbloc.in/environment/
24	Production capacity increase intimation letter dated 21-February-2021
25	Indian Standard on common burnt clay building bricks – specifications (IS 1077:1992) published by Bureau of Indian Standards, Government of India. https://law.resource.org/pub/in/bis/S03/is.1077.1992.pdf
26	Google Earth web application https://earth.google.com/web/
27	A report on Roadmap for Promoting Resource Efficient Bricks in India: A 2032 strategy, prepared by Shakti Sustainable Energy Foundation in December 2017.

	https://shaktifoundation.in/wp-content/uploads/2018/04/Roadmap-for-promoting-Resource-Efficient-Bricks-in-India-Summary-report.pdf
28	Information on different types of trucks and load capacities in India. https://www.mahindratruckandbus.com/english/blog/trucks-types-and-load-capacities.aspx
29	IPCC Report published in 2006: https://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/2_Volume2/V2_1_Ch1_Introduction.pdf#page=18 IPCC report published in 2019. https://www.ipcc-nggip.iges.or.jp/public/2019rf/pdf/2_Volume2/19R_V2_1_Ch01_Introduction.pdf
30	Information on accuracy class of weighbridge. https://www.jjweigh.com/news/what-is-the-allowable-error-for-the-accuracy-of-the-weighing-scale/
31	- Report on Market Transformation towards Energy Efficiency in Brick Sector published by Bureau of Energy Efficiency. https://www.beeindia.gov.in/sites/default/files/Brick%20Sector%20Market%20Transformation%20Blueprint_BEE.pdf - Report on Energy & Resource Mapping of MSME Brick Sector published by Bureau of Energy Efficiency. https://beeindia.gov.in/sites/default/files/Brick_sector_Energy_Mapping.pdf
32	- ESG profile of the project proponent. https://bigbloc.in/governance/ - Business Responsibility & Sustainability Report for the year, 2023-24 https://bigbloc.in/wp-content/uploads/2025/01/BigBloc_AR2024.pdf

APPENDIX 3: RESOLUTION OF CORRECTIVE ACTION REQUESTS AND CLARIFICATION REQUESTS

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

FAR ID	XX	Section no.	XXX	Date : XX/XX/XXXX
Description of CR				

Project participant response	Date : XX/XX/XXXX
Documentation provided by project participant	
DOE assessment	Date: XX/XX/XXXX

Table 2. CL from this verification

CL ID	01	Section no.	1.1 & 1.9	Date : 20/10/2022
Description of CR				
Project participant response				Date : 26/10/2022
Documentation provided by project participant				
DOE assessment				Date: XX/XX/XXXX

Table 3. CAR from this verification

CAR ID	01	Section no.	4.2	Date : 25/August/2023
Description of CAR				
The parameter, D _{GY} Quantity of Diesel consumed in the plant in the year Y, is missing in section 4.2 of the monitoring report.				
Project participant response				Date : 20/September/2024
This parameter and the measured values were included in the version 2 of the monitoring report.				
Documentation provided by project participant				
MR				
DOE assessment				Date: 27/September/2024
The parameter, DGY Quantity of Diesel consumed in the plant in the year Y is found to be incorporated in section 4.2 of the revised MR submitted by the project proponent. CAR is closed.				

CAR ID	02	Section no.	4.2	Date : 25/August/2023
Description of CAR				
The values of the monitoring parameters and the details of the measuring equipment used in the current monitoring report are missing in section 4.2 of the monitoring report.				
Project participant response				Date : 20/September/2024
Included in the version 3 of the MR				
Documentation provided by project participant				
MR				
DOE assessment				Date: 27/September/2024
The values of the monitoring parameters and the details of the measuring equipment used in the current monitoring report are found to be incorporated in section 4.2 of the revised MR submitted by the project proponent.				
CAR is closed.				

CAR ID	03	Section no.	4.2	Date: 23-February-2024
Description of CAR				
It has been observed that the quantity of aluminum powder has been considered wrongly in cells, H81 and I81 of "ER sheet". Correction required.				
Project participant response				Date: 20-September-2024
The quantity of aluminum powder has been corrected in the revised ER sheet and submitted to VVB.				
Documentation provided by project participant				
Revised ER sheet				
DOE assessment				Date: 04-October-2024

The revised ER sheet submitted by the project proponent has been checked and found that the error has been rectified appropriately.

CAR is closed.

CAR ID	04	Section no.	4.2	Date: 23-February-2024
Description of CAR				
In line with the FAR raised during the previous verification of the project, it is observed that the PLF achieved during the period from 01-January-2021 to 31-December-2021 is 105.09%. The project proponent needs to justify the same.				
Project participant response				Date: 20-September-2024
The initial (registered) production capacity of the AAC block manufacturing plant was 300,000 cubic meter per annum which has been increased to 360,000 cubic meters per annum w.e.f 19-February-2021. This was done by the project proponent to meet the growing demand of AAC blocks in the region. The project proponent does not propose to claim the emission reduction from the additional capacity. To account the emission reduction from the original capacity of 300,000 cubic meter per annum, the project proponent has apportioned the production based on the actual PLF realized in the monitoring period (with 360,000 cubic meter per annum capacity). The monthly PLF values calculated based on 360,000 cubic meter per annum are applied with the original capacity as per registered PD, 300,000 cubic meter per annum. This should be noted that while calculating the monthly PLF based on the increased capacity, i.e. 360,000 cubic meter per annum, in some of the months the monthly PLF value has been gone up to close to 100%. As the PLF is calculated by considering the monthly calculated capacity, 30,000 cubic meter (360,000/12). However, the annual average PLF has been calculated to be less (87% for Sep-2021 to Aug-2022 and 69% for Sep-2022 to Nov-2022). Hence, the same should be acceptable. The increased production capacity of the plant does not impact the applicability of the methodology, additionality or the appropriateness of the baseline scenario, and the project remains in conformance with the applied methodology even after the capacity enhancement. The additionality of the project was demonstrated using the barrier analysis at the time of project registration, hence, the financial impact due to the change in production capacity would not put any impact of additionality of the project.				
Documentation provided by project participant				

Revised MR, ER sheet and Production increase intimation letter	
DOE assessment	Date: 04-October-2024
As observed, the initial (registered) production capacity of the AAC block manufacturing plant was 300,000 cubic meter per annum which has been increased to 360,000 cubic meters per annum w.e.f 19-February-2021. This was done by the project proponent to meet the growing demand of AAC blocks in the region. The production capacity intimation letter submitted by the project proponent/24/ has been reviewed and found to be appropriate. The project proponent has sought approval of this deviation in line with paragraph 3.21 of the VCS standard/4. The detail assessment on the same is included in section 3.2 of the verification report. The project proponent has applied an alternate approach to account the emission reduction to corresponding to the original capacity, 300,000 cubic meter per annum in stead of the increased capacity, i.e. 360,000 cubic meter per annum. The project proponent has apportioned the production based on the actual PLF realized in the monitoring period (with 360,000 cubic meter per annum capacity). The monthly PLF values calculated based on 360,000 cubic meter per annum are applied with the original capacity as per registered PD/3/, 300,000 cubic meter per annum. This has been found to be appropriate and acceptable by the verification team. Further, when the production quantity of the AAC block has been considered based on apportionment approach to account the production corresponding to the original capacity for baseline emission calculation, the project emission and leakage emission has been calculated based on the entire quantities of consumable items based on the increased capacity of 3,60,000 cubic meter per annum. This has been found to be conservative and acceptable being in line with paragraph 3.21.3 of the project standard/4/ which requires the project not to claim additional emission reduction resulting from a project description deviation. This should be noted that while calculating the monthly PLF based on the increased capacity, i.e. 360,000 cubic meter per annum, in some of the months the monthly PLF value has been gone up to close to 100%. As the PLF is calculated by considering the monthly calculated capacity, 30,000 cubic meter (360,000/12). However, the annual average PLF has been calculated to be less (87% for Sep-2021 to Aug-2022 and 69% for Sep-2022 to Nov-2022). Hence, the same should be acceptable. CAR 04 is closed.	

APPENDIX 4: SITE PHOTOGRAPHS



