CDM Project Activity Registration and Validation Report Form

(By submitting this form, designated operational entity confirms that the proposed CDM project activity meets all validation and registration requirements and thereby requests its registration)

Section 1: Request for registration	
Name of the designated operational entity (DOE) submitting this form	SGS United Kingdom Ltd
Title of the proposed CDM project activity (Section A.2 of the attached CDM-PDD) submitted for registration	RIMA Fuel Switch in Bocaiúva
Project participants (Name(s))	RIMA Industrial S/A
Sector in which project activity falls	1- Energy industries (renewable / non-renewable sources)
Is the proposed project activity a small-scale activity?	**Yes** / No *(underline as applicable)*

Section 2: Validation report	
List of documents to be attached to this validation report (please check mark)*:*	

☒ The CDM-PDD of the project activity

☒ An explanation by the submitting designated operational entity of how it has taken due account of comments on validation requirements received, in accordance with the CDM modalities and procedures, from Parties, stakeholders and UNFCCC accredited non-governmental organizations;

- ❑ The written approval of voluntary participation from the designated national authority of each Party involved, including confirmation by the host Party that the project activity assists it in achieving sustainable development:
  - o (Attach a list of all Parties involved and attach the approval (in alphabetical order))

☒ Other documents, including any validation protocol used in the validation

- o (comprehensive list of documents attached clearly referenced)
- o List of persons interviewed by DOE validation team during the validation process
- o Any other documents. Please specify.

☒ Information on when and how the above validation report is made publicly available.

- ❑ Banking information on the payment of the non-reimbursable registration fee
- ❑ A statement signed by all project participants stipulating the modalities of communicating with the Executive Board and the secretariat in particular with regard to instructions regarding allocations of CERs at issuance

Executive Summary and Introduction, including

- **Description of the proposed CDM project activity**
- **Scope of validation process (include all documentation that has been reviewed and name persons that have been interviewed as part of the validation, as applicable)**
- **DOE Validation team (list of all persons involved in the validation, describing functions assumed in the validation)**

Description of the proposed CDM project activity

This report summarizes the results of the validation of the project, performed on the basis of UNFCCC criteria. The validation has been performed as a desk review of the project documents presented by RIMA and a site visit to RIMA unit, where staff from the company and its consultant was interviewed.

The purpose project activity is switch from fossil fuel oil to renewable biomass (charcoal fines). This plant produces metallic magnesium and alloys, both as lingots and powder, and auto parts, the main consumers of which are the steel, aluminium and automobile sectors.
The project is located in the first step of the Rima process, in the dolomite kiln (dolomite calcining process). The project involves installing a new burner in order to be able to burn charcoal fines. The new burner was developed internally by Rima technical staff. The project includes storage facilities, feeding system for the charcoal fines and hot gas recycling to dry the fines.
The kiln was designed for a thermal capacity equivalent to 12.5 MW.

The project activity is located in Bocaiúva, in the northern part the State of Minas Gerais, Brazil.

Total amount of emission reductions for the fixed crediting period (10 years) is 288,491 tCO2e

Baseline Scenario:
The use of fossil fuel oil in the operation of the dolomite kiln.

With-project scenario:
The use of renewable charcoal fines in the dolomite kiln, a fuel with lower carbon emission factor than the fossil fuel oil previously used.

Leakage:
The equipment was developed internally and it was not transferred from or to another activity, leakage was not considered.

Environmental and social impacts:

It was verified that the project contribute to the use of sustainable renewable energy source instead of non renewable ones.
This cleaner source of thermal energy has an important contribution to environmental sustainability by reducing carbon dioxide emissions, by avoiding the combustion of fossil fuel oil.

Regarding the social impacts, the project increases local job opportunities because the project requires additional manpower and contributes to technical development and capacity of the Rima's employees.
Rima has the necessary license to the project activity.

Scope
The scope of the validation is the independent and objective review of the project design document, the baseline study and monitoring plan and other relevant documents of the Rima Fuel Switch in Bocaiúva Project. The information in these documents is reviewed against the criteria defined in the Marrakech Accords (Decision 17) and the Kyoto Protocol (Article 12) and subsequent guidance from the CDM Executive Board. The validation is not meant to provide any consulting towards the Client. However, stated requests for clarifications and/or corrective actions may provide input for improvement of the project design.

Overview of documentation that has been reviewed and names of persons that have been interviewed as part of the validation

Please refer to Annex 3.

DOE Validation team

Name	Role
Fabian Gonçalves	Team leader / lead assessor
Geisa Principe	Local assessor
Irma Lubrecht	Technical reviewer

Description of methodology for carrying out validation

- **Review of CDM-PDD and additional documentation attached to it**
- **Assessment against CDM requirements (e.g. by use of a validation protocol)**
- **Report of findings by the DOE, e.g. by use of type of findings (e.g. corrective action requests, clarifications or observations). Please explain the way findings are "labelled" during validation.**
- **Include statements or assessments in the section "Conclusions, final comments and validation opinion" below.**

Review of CDM-PDD and additional documentation

The validation was performed primarily as a document review of the publicly available project documents (see Annex 3 for the list of documents). The assessment was carried out by trained assessors using a customised validation protocol.

A site visit was required to verify assumptions in the baseline. Additional information was required to complete the validation, which was obtained through telephone, e-mail and face-to-face interviews with the project developers. These were performed by local assessor from the SGS do Brazil. The results of the site visit carried out on 16th and 17th August 2006 are summarised in Annex 6 to this report.

Assessment against CDM requirements

In order to ensure transparency, a validation protocol was customised for the project. The protocol shows requirements, means of verification and the results from validating the identified criteria. The validation protocol serves the following purposes:

- it organises, details and clarifies the requirements the project is expected to meet; and
- it documents both how a particular requirement has been validated and the result of the

validation.

The validation protocol consists of several tables. The different columns in these tables are described below.

Checklist Question	*Means of verification (MoV)*	*Comment*	*Draft and/or Final Conclusion*
The various requirements are linked to checklist questions the project should meet.	*Explains how conformance with the checklist question is investigated. Examples of means of verification are document review (DR) or interview (I). N/A means not applicable.*	*The section is used to elaborate and discuss the checklist question and/or the conformance to the question. It is further used to explain the conclusions reached.*	*This is either acceptable based on evidence provided (**OK**), or a **Corrective Action Request (CAR)** due to non-compliance with the checklist question (See below). **New Information Request (NIR)** is used when the validation team has identified a need for further clarification.*

The completed validation protocol for this project is attached as Annex 4 to this report.

Report of findings and use of type of findings.

As an outcome of the validation process, the team can raise different types of findings.

Where insufficient or inaccurate information is available and clarification or new information is required the Assessor shall raise a **New Information Request (NIR)** specifying what additional information is required.

Where a non-conformance arises that requires the Project Developer to do something (for example correct something in the PDD) the Assessor shall raise a **Corrective Action Request (CAR).**

Observations may also be raised which are for the benefit of future projects and future verification or validation actors. These have no impact upon the completion of the validation or verification activity.

New Information Requests and Corrective Action Request are raised in the draft validation protocol and detailed in a separate form (Annex 5). In this form, the Project Developer is given the opportunity to “close” NIRs and CARs.

For this project, the *New Information Requests (NIR)* and the *Corrective Action Request (CAR)* were closed out through communication between validation team and the project developers. Changes to the project design were necessary to clarify the issues raised.

Explanation by the submitting designated operational entity of how it has taken due account of comments on validation requirements received, in accordance with the CDM modalities and procedures, from Parties, stakeholders and UNFCCC accredited non-governmental organizations;

- **Description of how and when the PDD was made publicly available**
- **Description of how comments were received and made publicly available**
- **Explanation of how due account has been taken of comments received**
- **Compilation of all comments received (Identify the submitter)**

In accordance with the CDM modalities and procedures, the project design document of this proposed CDM project activity has been made publicly available and comments have been

invited from Parties, stakeholders and UNFCCC accredited non-governmental organizations. This process is described in Annex 1 to this report which is available as a separate document.

Conclusions, final comments and validation opinion

- **Provide conclusions on each requirement under paragraph 37 of the CDM modalities and procedures, describing how these requirements have been meet. This shall include assessments and findings (e.g. corrective action requests, clarifications or observations) in relation to each requirement, including a confirmation that all issues raised have been addressed to the satisfaction of the DOE.**
- **Final comments and validation opinion**

Participation requirements

Brazil is listed as the host Party. Brazil has ratified the Kyoto Protocol on 23rd August 2002 (http://unfccc.int/files/essential_background/kyoto_protocol/application/pdf/kpstats.pdf).

At time of the validation, no Letter of Approval from the host country had been provided. The Letter of Approval will be signed when the DNA of Brazil receive and analyse the validation report.

Eligibility as a small scale project activity

Rima project is a small scale project activity and falls under the category I.C - "Thermal energy for the user", that comprises renewable energy technologies and that displaces fossil fuels or non-renewable sources of biomass.

To qualify as a small-scale project as defined in paragraph 6 (c) of decision 17/CP.7 on the modalities and procedures for the CDM, the project activity must meet the following criteria:

(i) Renewable energy project activities with a maximum output capacity equivalent of up to 15 megawatts (or an appropriate equivalent);
(ii) Energy efficiency improvement project activities which reduce energy consumption, on the supply and/or demand side, by up to the equivalent of 15 gigawatt/hours per year;
(iii) Other project activities that both reduce anthropogenic emissions by sources and directly emit less than 15 kilotonnes of carbon dioxide equivalent annually;

The total installed capacity of the kiln is 12.5 MW and is therefore fully eligible as a small-scale project (lower than 15 MW). Project participant does not have any other CDM project activity in the same site and category. The project boundary is limited to the physical, geographical site of the Rima's plant. The UNFCCC website does not show another registered project with the same characteristics.

It was necessary to revise section A.4.5 of the PDD according Appendix C (Simplified Modalities and Procedures for SSC CDM). NIR 1 was raised.

Section A.4.5 was revised in the new version of the PDD (version 2) and it was confirmed that the project is not debundled component of a larger activity. NIR 1 was closed out.

Baseline and monitoring methodology

The methodology applied to this Small Scale Project activity is Type 1: Renewable energy projects. Category, IC: Thermal energy for the user.

For renewable energy technologies that displace technologies using fossil fuels, the simplified baseline is the fuel consumption of the technologies that would have been used in the absence of the project activity times an emission coefficient for the fossil fuel displaced. The choice of the applicable baseline calculation for the project category is justified on the PDD, section B2. The project complies with the applicability conditions.

Additionality

According to simplified methodologies, project participants shall provide an explanation to show that

the project activity would not have occurred anyway due to at least one pre-defined barrier.

The additionality of the project activity is assessed and demonstrated through Attachment A to Appendix B of the Simplified Modalities and Procedures for small-scale CDM project activities.

As described in the PDD and verified during the validation, the project faced investment barrier and technological barrier.

To confirm investment barriers described in the PDD it was verified project cash flow (data used, formulas). During validation assessment it was verified the data used in the investment barrier, verified the worksheet that describes the invoice, item, description, value and supplier related to the new equipment installed for the project activity (references were verified, Brazilian energetic balance, ANP, BCB). The project invested US$ 250,000 until now and will invest more US$ 308,000 to conclude the project. The NPV is negative without CERs and positive with CERs. The data presented under investment barrier demonstrates that CERs is necessary to implement the project.

Technological barrier: this barrier results in additional investments and operational costs and training personnel. Verified evidences of training and investments; it was necessary to contract more employees. The project and new equipments were developed internally, many changes were necessary. This represents a real barrier to implement the project activity.
Also it was verified the board meetings that consider the carbon credits and the possibility to implement the CDM project as real and necessary to enable the change from fuel oil to charcoal fines in the dolomite kiln.

Monitoring plan

For renewable energy technologies that displace fossil fuels, the consumption of biomass is the only parameter that needs to be monitored.

Monitoring variable is the consumption of biomass, in mass unit that is directly measured and monitored at the injection point of the kiln (Section D of the PDD). The project will monitor the output of the dolomite kiln; this data will be used for checking plausibility of charcoal fines consumption.

CAR 3 was raised: To review the net calorific value of the charcoal fines according to the analysis verified during site visit and all information presented in the PDD under this data.

The revised PDD (version 2) and worksheet presents the correct information. CAR 3 was closed out. References and source of data about charcoal fines and fuel oil density and LHV used were presented during validation assessment.

The validation team concluded that the monitoring plan present good monitoring practice appropriate to the circumstances of the project activity.

Environmental Impacts

The project complies with the environmental regulations of the country. The plant has the required Environmental license issued by the State environmental agency, FEAM. The document was verified during the validation assessment (Operation license, Nº 661, 2/12/2003, issued by FEAM). It was verified that the project activity presents no major environmental impacts and do not require a specific Environmental Impact Assessment.

Verified that charcoal suppliers are in according to environmental requirements. Verified invoices of the charcoal and all invoices present the State Forestall Institute control (IEF).

Comments by local stakeholders

Local stakeholders have been invited by letters to comment on the Rima Fuel Switch in Bocaiúva Project.

The invitation was sent to specific stakeholders, considered representative of the general public, as

required by Resolution 1 of the Brazilian DNA. The following stakeholders were invited to comment on the project:

- Environment Secretary of the State of Minas Gerais;
- Fórum Brasileiro de ONGs e Movimentos Sociais para o Meio Ambiente e Desenvolvimento;
- Conselho Municipal de Desenvolvimento Ambiental do Município de Bocaiúva, Minas Gerais;
- Mayor, President of the County Hall and Secretary in charge of Environment of the county of Bocaiúva, in the state of Minas Gerais;
- State Attorney Office of Minas Gerais (Procuradoria do Ministério Público de Minas Gerais);
- State Forestry Institute of Minas Gerais (IEF – MG);
- Store Owner Association in Bocaiúva, Minas Gerais.

CAR 2 was raised: to send a letter to IEF (local stakeholder). The letter was sent and copy was provided. CAR 2 was closed out.
Copies of the letters were verified during validation assessment.
No comment from local stakeholders was received.

Other requirements

The PDD has been prepared in accordance with appendix A of Annex II to Decision 21/CP8. The project applies correctly the PDD template. No changes were observed.

The project design engineering reflects current good practices.

Project's starting date and operational lifetime is clearly defined.

Final comments and validation opinion

Steps have been taken to close out three Findings.

SGS has performed a validation of project: Rima Fuel Switch in Bocaiúva. The validation was performed on the basis of the UNFCCC criteria and host country criteria, as well as criteria given to provide consistent project operations, monitoring and reporting. Using a risk based approach, the validation of the project design documentation and the subsequent follow-up interviews have provided SGS with sufficient evidence to determine the fulfilment of the stated criteria.

By thermal energy generation with biomass burning, the project results in reducing greenhouse gas emissions that are real, measurable and give long-term benefits to the mitigation of climate change. A review of the barriers presented demonstrates that the proposed project activity was not a likely baseline scenario. Emission reductions attributable to the project are hence additional to any that would occur in the absence of the project activity. If the project is implemented as designed, the project is likely to achieve the estimated amount of emission reductions.
The validation is based on the information made available to SGS and the engagement conditions detailed in the report. The validation has been performed using a risk based approach as described above. The only purpose of this report is its use during the registration process as part of the CDM project cycle. Hence SGS can not be held liable by any party for decisions made or not made based on the validation opinion, which will go beyond that purpose.

The DOE declares herewith that in undertaking the validation of this proposed CDM project activity it has no financial interest related to the proposed CDM project activity and that undertaking such a validation does not constitute a conflict of interest which is incompatible with the role of a DOE under the CDM.

By submitting this validation report, the DOE confirms that all validation requirements are	The SGS will request the registration of the RIMA Fuel Switch in Bocaiúva Project as a CDM project activity, once the written approval by the DNA of the

met. Name of authorized officer signing for the DOE	participating Parties and the confirmation by the DNA of Brazil that the project assists in achieving sustainable development has been received.
Date and signature for the DOE	

Section below to be filled by UNFCCC secretariat		
Date when the form is received at UNFCCC secretariat		
Date at which the registration fee has been received		
Date at which registration shall be deemed final		
Date of request for review, if applicable		
Date and number of registration	Date	Number