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	TÜV Industrie Service GmbH TÜV SÜD Group
Title of the proposed CDM project activity (Section A.2 of the attached CDM-PDD) submitted for registration	Monte Rosa Bagasse Cogeneration Project (MRBCP)
Project participants (Name(s))	Monte Rosa S.A Econergy Brasil Ltda.
Sector in which project activity falls	Scope 1
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)*:*	

X The CDM-PDD of the project activity

X 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. This explanation is included in the Validation Report No. 691171, rev. 0;

X 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:

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

- Validation Report (Validation Report No. 691171, rev. 0) including a validation protocol, information reference list and and a list of persons interviewed by DOE validation team during the validation process.

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

❑ Banking information on the payment of the non-reimbursable registration fee

X 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)**

Monte Rosa Bagasse Cogeneration Project (MRBCP) activity aims to increase its energy efficiency and cogeneration capacity in order to supply electricity to the grid, therefore adding value to the bagasse produced by the company. Currently, the total installed electric power capacity is 26 MW, but only 18 MW are actually used, leaving 8 MW as standby. Through phased installation of substantially more capacity, improved energy efficiency in its processes, and generation of sufficient bagasse around the harvest season, Monte Rosa has generated surplus electricity of about 94.000 MWh during the 2001 – 2003 period, and will generate surplus electricity of approximately 93.000 MWh in 2004, increasing to 120.000 MWh in 2008. These sales of electricity to the grid allow it to participate in the emissions reduction market. Monte Rosa does not have a power purchase agreement. Instead, it opted to commercialize its surplus electricity in the spot market, known in Nicaragua as "mercado de ocasión". There are 2 phases for this project:

- The first expansion (1st phase) was in cane season 2001-2002 with the installation of an extraction turbo generator of 15 MW. At that time, Monte Rosa started to sell energy to the grid.

- The second expansion (2nd phase) consists of the phased addition of steam turbo generators and a 900 psi (62 bar) high-pressure boiler which will burn the sugar cane residue produced in the mill to generate steam. The steam will be directed to the turbo generators, generating electricity at a voltage of 13.800 volts. The steam leaving the turbines is condensed in a cooling tower, and the condensate is recycled and redirected to the boilers (a simple steam cycle). The electricity voltage is increased to 69.000 volts at an on-site substation. It is then transmitted to another sub-station 15 km away, located in the city of El Viejo, Nicaragua.

Sugar mill Monte Rosa is located five km away from El Viejo City, at Km 148 Way to Potosí, Municipio El Viejo, Chinandega, Nicaragua, Central America.
Project participants are Monte Rosa S.A and Econergy Brazil Ltda..
The project starting date is March 1, 2002. The 7 year renewable crediting period starts also on March 1, 2002.

The validation scope is defined as an independent and objective review of the project design document, the project's baseline study and monitoring plan and other relevant documents. The information in these documents is reviewed against Kyoto Protocol requirements, UNFCCC rules and associated interpretations. TÜV SÜD has, based on the recommendations in the Validation and Verification Manual employed a risk-based approach in the validation, focusing on the identification of significant risks for project implementation and the generation of CERs.
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.
The audit team has been provided with a draft PDD in August 2005. Based on this documentation a document review and a fact finding mission in form of an on-site audit has taken place. Afterwards the client decided to revise the PDD according to the CARs and CRs indicated in the audit process also taking into account new developments on the regulatory side (as for example the new PDD format). The final PDD version submitted on December 15, 2005 serves as the basis for the assessment presented herewith. The correction of CARs and CRs is not considered to be significant with respect to the qualification of the project as a CDM project based on the two main objectives of the CDM to achieve a reduction of anthropogenic GHG emissions by sources and to contribute to sustainable development. Hence no repetition of the public stakeholder process has taken place.
Studying the existing documentation belonging to this project, it was obvious that the competence and capability of the validation team has to cover at least the following aspects:

- Knowledge of Kyoto Protocol and the Marrakech Accords
- Environmental and Social Impact Assessment
- Skills in environmental auditing (ISO 14000, EMAS)
- Quality assurance
- Technical aspects of renewable energy and grid operation
- Monitoring concepts
- Political, economical and technical random conditions in host country

The validation team was consisting of the following two experts:
Markus Knödlseder (Project manager, GHG lead auditor)
Mauro Fadda (GHG auditor, local expert)
Markus Knödlseder: After his professional training as chemical assistance Mr. Knödlseder studied environmental engineer at the University of Applied Science in Bingen, Germany. Beside his main focus in studies of environmental technologies, he dealt with environmental management and environmental controlling issues. He has been a staff at the department "Carbon Management Service" located in the head office of TÜV Industrie Service GmbH, TÜV SÜD Group in Munich since Oct. 2001. He has been involved in the topic of environmental auditing, baselining, monitoring and verification due to the requirements of the Kyoto Protocol with special focus on renewable energies. Mr. Knödlseder is also an auditor for environmental management systems (ISO 14.000).
Mr. Mauro Fadda is a quality and environmental management system auditor at ccaQualitas, TÜV SÜD Group. He is familiar with local laws and regulations and the assessment of technical installations as well as with CDM issues. Meanwhile he can refer to the participation in the validation process of more than 15 CDM-projects in Brazil. Thus he is approved as CDM-auditor at the certification body Climate and Energy.
The audit team covers the above mentioned requirements as follows:

- Knowledge of Kyoto Protocol and the Marrakesh Accords (All)
- Environmental and Social Impact Assessment (All)
- Skills in environmental auditing (All)
- Quality assurance (All)
- Technical aspects (All)
- Monitoring concepts (Knödlseder)
- Political, economical and technical random conditions in host country (Fadda)

In order to have an internal quality control of the project, a team of the following persons has been composed by the certification body "climate and energy":

- Werner Betzenbichler – Head of the Certification Body "Climate and Energy"

For further details please refer to the "Introduction" section of the validation report (Validation Report No. 691171, rev. 0).

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.**

The validation of the project consists of the following three phases:

- Desk review
- Follow-up interviews
- Resolution of clarification and corrective action requests

In order to ensure transparency, a validation protocol was customised for the project, according to the Validation and Verification Manual. The protocol shows, in a transparent manner, criteria (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 a CDM project is expected to meet;
- It ensures a transparent validation process where the validator will document how a particular requirement has been validated and the result of the validation.

The validation protocol consists of three tables. The completed validation protocol is enclosed in Annex 1 to this report.

Findings established during validation can either be seen as a non fullfillment of validation criteria or where a risk to the fulfilment of the project objectives is identified. Such findings are termed Corrective Action request. The term "Clarification request" is used when the validation team has identified a need for further clarification.

The Corrective Action Requests and Clarification Requests raised by TÜV SÜD were resolved during communication between the client and TÜV SÜD. To guarantee the transparency of the validation process, the concerns raised and responses that have been given are summarised in chapter 3 of the validation report and documented in more detail in the validation protocol in annex 1 to the validation report. The validation of the project resulted in eighteen Corrective Action Request and twelve Clarification Requests.

For further details please refer to the "Methodology" section of the validation report (Validation No. 691171, rev. 0).

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)**

TÜV SÜD published the project documents on its website (http://www.netinform.net/KE/Wegweiser/Ebene1_Projekte.aspx?Ebene1_ID=26&mode=1). The PDD will be open for comments from November 16 to December 15, 2005 and invited comments within 30 days, stakeholders and non-governmental organisations. No comments were received.

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**

TÜV SÜD has performed a validation of the Monta Rosa Bagasse Cogeneration Project. The validation was performed on the basis of UNFCCC criteria and host country criteria, as well as criteria given to provide for consistent project operations, monitoring and reporting. UNFCCC criteria refer to Article 12 of the Kyoto Protocol, the CDM modalities and procedures and subsequent decisions by the CDM Executive Board.

The review of the project design documentation and the subsequent follow-up interviews have provided TÜV SÜD with sufficient evidence to determine the fulfilment of stated criteria. In our opinion, the project does meet all relevant UNFCCC requirements for the CDM and all relevant host country criteria. The project will hence be recommended by TÜV SÜD for registration with the UNFCCC.

By displacing fossil fuel-based electricity in principal with electricity generated from a renewable source, the project results in reductions of CO_2 emissions that are real, measurable and give long-term benefits to the mitigation of climate change. An analysis of the investment and technological barriers demonstrates that the proposed project activity is 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. Given that the project is implemented as designed, the project is likely to achieve the estimated amount of emission reductions.

Additionally the assessment team reviewed the estimation of the projected emission reductions. We can confirm that the indicated amount of emission reductions of 392 139 tonnes CO_2e over a crediting period of seven years, resulting in a calculated annual average of 56 020 tonnes CO_2e, represents a reasonable estimation using the assumptions given by the project documents.

The validation is based on the information made available to us and the engagement conditions detailed in this 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, TÜV SÜD 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 met. Name of authorized officer signing for the DOE	Werner Betzenbichler
Date and signature for the DOE	December 20, 2005

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