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	Det Norske Veritas Certification Ltd. (DNV)
Title of the proposed CDM project activity (Section A.2 of the attached CDM-PDD) submitted for registration	UTE Barreiro S.A. Renewable Electricity Generation Project
Project participants (Name(s))	Vallourec & Mannesmann Tubes (Brazil) and EcoSecurities (United Kingdom)
Sector in which project activity falls	Energy industries
Is the proposed project activity a small-scale activity?	Yes

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 (Note: Included in DNV's Validation Report (DNV report 2005-0025, rev 04));
- ❑ The written approval of voluntary participation from the designated national authority of each Party involved, including confirmation by the host Party hat the project activity assist it in achieving sustainable development:
  - (Attach a list of all Parties involved and attach the approval(in alphabetic order))
- ☑ Other documents, including any validation protocol used in the validation.
  - DNV's Validation Report (DNV report 2005-0025, rev 04), including a validation protocol and a list of person interviewed by DNV validation team during the validation process.
- ❑ 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 Border and the secretariat in particular with regard to instructions regarding allocation 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)**

The project activity consists of the construction of a 12.9 MW thermoelectric plant that will generate part of the electricity required by Barreiro's Integrated Steel Plant (Usina Siderúrgica Integrada do Barreiro). The thermoelectric plant may use three different fuels: blast furnace gas, wood tar and, exceptionally, natural gas. The plant is designed to operate at 100% capacity using only blast furnace gas and wood tar. During regular operation conditions no natural gas will be used. Nevertheless, in the case of reduced supply of the other two fuels, in order to ensure the electricity generation, natural gas may be used. As a consequence of the construction of the plant there will be a reduced need for electricity supplied from the grid for the operation of the steel plant.

The validation scope is defined as an independent and objective review of the project design document (PDD). The PDD is reviewed against the criteria stated in Article 12 of the Kyoto Protocol, the CDM modalities and procedures as agreed in the Marrakech Accords, the simplified modalities and procedures for small-scale CDMM project activities and the relevant decisions by the CDM Executive Board. The validation team has, base done the recommendation in the IETA/PCF Validation and Verification Manual, employed a risk-based approach, focusing on the identification of significant risks for the project implementation and the generation of CERs.

The following documents were reviewed:

UTE Barreiro SA Small Scale CO_2 Project PDD, version August 2003

UTE Barreiro S.A. Renewable Electricity Generation Project PDD, version December 2004

UTE Barreiro S.A. Renewable Electricity Generation Project PDD, version May 2005

UTE Barreiro S.A. Renewable Electricity Generation Project PDD, version August 2005

Spreadsheet of Calculation of Combined Margin (ONS database SSC 2001-2003 v.05.xls), 26 May 2005.

Appendix B of the simplified modalities and procedures for small-scale CDM project activities, Indicative simplified baseline and monitoring methodologies for selected small-scale CDM project activity categories, (Version 05 of 25 February 2005).

Martina Bosi: Road-Testing Baselines for Greenhouse Gas Mitigation Projects in the Electric Power Sector (OECD and IEA Information Paper COM/ENV/EPOC/IEA/SLT(2002)6). October 2002. Available at http://www.oecd.org.

International Emissions Trading Association (IETA) & the World Bank's Prototype Carbon Fund (PCF): Validation and Verification Manual. Available at http://www.vvmanual.info.

The following persons were interviewed:

Sergio Ceriassi F.M – V&M Energy and Utilities Manager
Eduardo Botelho – V&M Controler of Energy and Utilities Dep.
Flavia A. Resende – EcoSecurities Consultoria

The validation team consist of the following personnel:

Mr Luis Filipe Aboim Tavares	DNV Rio de Janeiro
Mr Michael Lehmann	DNV Oslo
Mr Ramesh Ramashandran	DNV Chennai
Mr Einar Telnes	DNV Oslo

For further details, please refer to the "Introduction" Section of DNV's Validation Report (DNV report 2005-0025, rev 04).

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 consisted of the following three phases:
i) a desk review of the Project design and the baseline and monitoring methodology;
ii) follow-up interview with Project stakeholders;
iii) the resolution of outstanding issues and the issuance of validation report and opinion.

The Project Design Document submitted by V&M do Brasil SA on 11 August 2003, the revised PDD of December 2004 and the final PDD of August 2005 were reviewed.

On 29 October 2003 DNV performed interviews with staff of V&M UTE Barreiro and EcoSecurities during a site visit at the UTE Barreiro plant at Belo Horizonte, Minas Gerais State, to confirm and to resolve issues identified in the document review.

In order to ensure transparency, a validation protocol has been customized for the Project, according to the Validation ad Verification Manual. The protocol shows, in a transparent manner, criteria (requirements), means of verification and the results from validation the identified criteria.

Findings established during the validation can either be seen as a non- fulfilment of validation criteria or where a risk to the fulfilment of project objectives is identified. Such findings are termed Corrective Action Requests (CAR). The term Clarification may be used where additional information is needed to fully clarify an issue. The Corrective Action Request raised by the validation team was resolved through communications with the project participants. To guarantee the transparency of validation process, the concerns raised by DNV Certification and the response provided by the project participants are documented in Table 3 of the Validation Protocol in Appendix A of DNV's Validation Report (DNV report 2005-0025, rev 04).

For further details, please refer to the "Methodology" Section of DNV's Validation Report (DNV report 2005-0025, rev 04)and the IETA/PCF Validation ad Verification Manual (*www.vvmanual.info*)

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)**

DNV Certification published the initial PDD of May 2003 on the DNV Climate Change web site (*http://www.dnv.com/certification/ClimateChange*).and stakeholders were through the UNFCCC CDM web site invited to provide comments within a 30 days period from 19 September 2003 to 19 October 2003. No comments were received during this period.

Following DNV's accreditation, the PDD was republished on the DNV Climate Change web site. Parties, stakeholders and NGOs were through the UNFCCC CDM website invited to provide comments on the validation requirements during a 30 days period from 2 September 2004 to 2 October 2004. One comment was received during this period. The comment (in unedited form) and how DNV has taken due account of the comment received is given in the "Comments by Parties,

stakeholders and NGOs" Section of DNV's Validation Report (DNV report 2005-0025, rev 04).

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**

Det Norske Veritas Certification Ltd. (DNV) has performed a validation of the "UTE Barreiro S.A. Renewable Electricity Generation Project" at Belo Horizonte, Minas Gerais State, Brazil (hereafter called "the project"). The validation was performed on the basis of UNFCCC criteria for small-scale CDM project activities and relevant Brazilian criteria, as well as criteria given to provide for consistent project operations, monitoring and reporting.

The project participants are Vallourec & Mannesmann Tubes (Brazil) and EcoSecurities (UK). All Parties involved, i.e. Brazil and the United Kingdom, meet the requirements to participate in the CDM.

The proposed thermoelectric power project with a capacity of 12.9 MW will generate electricity utilizing blast furnace gas of the integrated Barreiro steel plant and wood tar from charcoal.

The project is not expected to have considerable environmental impacts. An Environmental Impact Study as required by Brazilian law has been carried out and the project has received the environmental licences by FEAM/COPAM.

By promoting renewable energy, the project is in line with the current sustainable development priorities of Brazil. Nevertheless, the Brazilian DNA has not yet confirmed that the project assists Brazil in achieving sustainable development.

Being a renewable energy project activity with an output capacity of less than 15 MW, the project meets the criteria for Renewable electricity generation for the grid (Category I.D) as defined in Appendix B of the simplified modalities and procedures for small-scale CDM project activities.

Category I.D comprises projects that "that supply electricity to an electricity distribution system. The electric energy generated by the project will be used by the integrated Barreiro steel plant and will reduce the imports from grid electricity. Hence, as this project activity reduces grid electricity imports and thus avoids marginal fossil fuel based electricity generation in the same way as projects supplying all their electricity to the grid, it is DNV's opinion that the project can apply the simplified baseline and monitoring methodology for category I.D small-scale CDM project activities.

The project applies the appropriate simplified baseline methodologies proposed for these small-scale project activity categories. A combined margin emission coefficient of 0.521 tCO_2e/MWh is calculated in accordance with the simplified baseline methodology for category I.D small-scale CDM project activities, i.e. the average of the approximate operating margin and the build margin. The determination of this combined margin emission coefficient is based on actual electricity generation data provided by the National Electricity System Operator (ONS) for the years 2001- 2003 in the South-Southeast-Midwest (S-SE-CO) grid.

The additionality of the project is demonstrated through a barrier test. The presented technological and investment barriers demonstrate the project is not a likely baseline scenario.

By displacing fossil fuel-based electricity, the project results in reductions of CO2 emissions that are real, measurable and give long-term benefits to the mitigation of climate change. Given that the project is implemented as designed, the project is likely to achieve the estimated amount of emission reductions.

The monitoring plan sufficiently specifies the monitoring requirements of the main project indicators.

In summary, it is DNV's opinion that the "UTE Barreiro S.A. Renewable Electricity Generation Project" as described in revised and resubmitted project design document of May 2005, meets all relevant UNFCCC requirements for the CDM and all relevant host country criteria and correctly applies the baseline and monitoring methodologies for category I.D small-scale CDM project activity. Hence, DNV will requests the registration of the "UTE Barreiro S.A. Renewable Electricity Generation Project" as CDM project activity.

For further details, please refer to the "Validation Findings" Section and Table 1 of the Validation Protocol in Appendix A of DNV's Validation Report (DNV report 2005-0025, rev 04).

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.	Prior to the submission of this validation report to the CDM Executive Board, DNV will have to receive the written approval of voluntary participation from the DNA of the participating Parties, including confirmation by the DNA of Brazil that the project assists in achieving sustainable development..
Name of authorized officer signing for the DOE	Michael Lehmann
Date and signature for the DOE	29 August 2005 Michael Lehmann

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