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	"Eliane Natural gas fuel switch project"
Project participants (Name(s))	Eliane (Maximiliano Gaidzinki S.A.) (Brazil) EcoSecurities (United Kingdom)
Sector in which project activity falls	Sectoral scope 4: Manufacturing Industries
Is the proposed project activity a small-scale activity?	No.

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 2006-0147, rev. 02));
- ❑ 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 2006-0147, rev. 02), 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)**

Eliane is a porcelain producer having six production units in Brazil. The project is restricted to the Criciúma (here after referred as Eliane IV) and Cocal do Sul units (here after referred as Eliane I, II III and V). The Criciúma and Cocal do Sul started operation in 1960. Both units have used fuel oil and cooking coal as the main energy source in all the spray dryers and the refractory tunnel kiln up to the year 2001. Since December 2000, seven spray dryers located at Criciúma and Cocal do Sul and one refractory tunnel kiln located at Cocal do Sul have been converted from fuel oil use (and coal use for one dryer) to the use of natural gas. Further two spray dryers will be converted in this year and conversion is expected to be completed in December 2006.

The estimated amount of GHG emission reductions from the project is calculated to be 131 796 tonnes CO_2 equivalents (tCO_2e) during the first renewable 7-year crediting period (with the potential of being renewed twice selected), resulting in estimated average annual emission reductions of 18 828 tCO_2e.

The validation scope is an independent and objective review of the Project Design Document (PDD). The PDD was reviewed against Kyoto Protocol criteria for the CDM, the CDM modalities and procedures as agreed in the Marrakech Accords and relevant decision by the CDM Executive Board. The validation team has, based one the recommendation in the IETA/PCF Validation and Verification Manual, and 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:

Eliane (Maximiliano Gaidzinki S.A.) and Ecosecurities: Project Design Document for the ”Eliane Natural Gas Fuel Switch Project”, Version 1 (27 December 2005)

Eliane (Maximiliano Gaidzinki S.A.) and Ecosecurities: Project Design Document for the ”Eliane Natural Gas Fuel Switch Project”, Version 2 (07 March 2006)

Eliane (Maximiliano Gaidzinki S.A.) and EcoSecurities Ltd.: Project Design Document for the “Eliane Natural Gas fuel switch project”. Version 03 of 28 July 2006.

Ecosecurities: Spreadsheet “Eliane-ER-and-FA-Calculations vf (LFKPF).xls - 2006-05-12

EcoSecurities Ltd.: Spreadsheet “Eliane ER and FA calculation 21-jul-2006.xls”

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

Approved Baseline and Monitoring Methodology ACM0009: “Consolidated methodology for industrial fuel switching from coal or petroleum fuel to natural gas”. Version 03 of 28 July 2006

CDM-EB: “Tool for the demonstration and assessment of additionality”. Version 02 of 28 November 2005

IPCC/NGGIP: Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories: Workbook – Module 1 Energy, Table 1-3 Selected Net Calorific Values)

The following persons were interviewed:

Jaime Batista – Eliane Engineering
Tales Alfredo Cittadin – Eliane Engeneering
Marcelo Duque – Ecosecurities
Luis Filipe Kopp – EcoSecurities

The validation team consisted of the following personnel:

Mr. Luis Filipe Tavares	DNV Rio de Janeiro	Team leader
Mr. Vicente San Valero	DNV Rio de Janeiro	CDM Technical manager
Mr K. Chandrashekara	DNV Bangalore	Manufacturing industries sector expert
Mr. Einar Telnes	DNV Oslo	Technical reviewer

For further details, please refer to the "Introduction" and "References" Sections of DNV's Validation Report (DNV Report 2006-0147, rev. 02).

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 started in December 2005. The validation consisted of the following three phases:

i) a desk review of the project design documents;
ii) follow-up interview with project stakeholders;
iii) the resolution of outstanding issues and the issuance of the preliminary validation report and opinion.

The original and revised versions of the project design document (PDD) submitted by the project participants were reviewed. Additional background documents related to the project design and the baseline were also consulted.

On 21 February 2006, DNV performed interviews with Eliane (Maximiliano Gaidzinki S.A. and EcoSecurities during a site visit at at Eliane facilities on Concal do Sul and Críciuma, Santa Catarina State.

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 Requests and requests for Clarification raised by the validation team were resolved through communications with the project participants. To guarantee the transparency of the validation process, the concerns raised by DNV 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 2006-0147, rev. 02).

For further details, please refer to the "Methodology" Section of DNV's Validation Report (DNV Report 2006-0147, rev. 02) 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 published the PDD of 28 July 2006 on the DNV Climate Change web site (http://www.dnv.com/certification/ClimateChange) and Parties, stakeholders and UNFCCC accredited NGOs were through the UNFCCC CDM web site invited to provide comments within a 30 days period from 05 August 2006 to 03 September 2006. No comments were received.

Prior to this, version 01 of 27 December 2005 of the PDD, applying AM0008, was made publicly available on DNV's climate change website and Parties, stakeholders and NGOs were, through the CDM website, invited to provide comments during a 30 days period from 31 December 2005 to 29 January 2006. One comment was received in this earlier call.

The comment received and how DNV has taken due account of the comment received are documented in the "Comments by Parties, stakeholders and NGO's" Section of DNV's Validation Report (DNV report 2006-0147, rev. 02).

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 "Eliane Natural Gas fuel switch project" at Cocal do Sul and Criciúma Municipalities, Santa Catarina State, Brazil. The validation was performed on the basis of UNFCCC criteria for 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 Eliane (Maximiliano Gaidzinki S.A.) of Brazil and EcoSecurities Ltd. of the United Kingdom. The host Party Brazil and the Annex I Party the United Kingdom meet all relevant participation requirements.

The project activity consists of the conversion of nine spray dryers and refractory tunnel kiln from fuel oil and coal use to the use of natural gas.

By promoting the use of a cleaner fuel, the project is in line with current sustainable development priorities of Brazil.

The project applies the approved baseline and monitoring methodology ACM0009, i.e. "Consolidated methodology for industrial fuel switching from coal or petroleum fuel to natural gas". The baseline methodology has been applied correctly and the assumptions made for the selected baseline scenario are sound. The baseline scenario assumes that fuel oil and coal would continue to be used during the crediting period. Emission reductions will thus be achieved through the use of natural gas, a fuel with a carbon emission factor that is lower than the carbon emission factor of the previously used fuel oil and coal.

It is sufficiently demonstrated that the project is not a likely baseline scenario and that emission reductions attributable to the project are additional to any that would occur in the absence of the project activity.

The calculation of the fuel oil and coal efficiency was based on porcelain production and heavy oil and coal consumption measurements of the equipment prior to the fuel switch. Appropriate estimates on future natural gas consumption and the natural gas efficiencies are used for the ex-ante determination of expected project and baseline emissions. However, actual project and baseline emissions and thus actual project emission reductions are dependent on the actual natural gas consumption (dynamic baseline).
The monitoring methodology has been applied correctly. The monitoring plan sufficiently specifies the monitoring requirements of the main project indicators. The fuel efficiency of natural gas will have to

be determined at an early stage of the project in accordance with ACM0009.

Local stakeholder comments were invited according to the Brazilian DNA Resolution 1. No comments were received. Public stakeholder input has also been invited via the UNFCCC web-site. One comment has been received and was taken into account during the validation.

In summary, it is DNV's opinion that the "Eliane Natural Gas fuel switch project", as described in the revised project design document of 28 July 2006, meets all relevant UNFCCC requirements for the CDM and all relevant host country criteria and correctly applies the baseline and monitoring methodology ACM0009. Hence, DNV will request the registration of the "Eliane Natural Gas fuel switch project" as a 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 2006-0147, rev. 02).

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 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	4 September 2006 Michael Lehma...

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