



### 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

<b>Name of the designated operational entity (DOE) submitting this form</b>	Det Norske Veritas Certification Ltd. (DNV)
<b>Title of the proposed CDM project activity (Section A.2 of the attached CDM-PDD) submitted for registration</b>	"Aços Villares Natural gas fuel switch project"
<b>Project participants (Name(s))</b>	Aços Villares S.A. (Brazil) EcoSecurities (United Kingdom)
<b>Sector in which project activity falls</b>	Sectoral scope 4: Manufacturing Industries
<b>Is the proposed project activity a small-scale activity?</b>	No.

#### Section 2: Validation report

<b>List of documents to be attached to this validation report (please check mark):</b>	
<ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> The CDM-PDD of the Project activity</li> <li><input checked="" type="checkbox"/> 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 2005-1171, rev. 02));</li> <li><input checked="" type="checkbox"/> 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: <ul style="list-style-type: none"> <li>o Letter of Approval by DNA of Brazil dated 09 May 2006</li> <li>o Letter of Approval by DNA of the United Kingdom dated 16 May 2006</li> </ul> </li> <li><input checked="" type="checkbox"/> Other documents, including any validation protocol used in the validation. <ul style="list-style-type: none"> <li>o DNV's Validation Report (DNV report 2005-1171, rev. 02), including a validation protocol and a list of person interviewed by DNV validation team during the validation process.</li> </ul> </li> <li><input checked="" type="checkbox"/> Information on when and how the above validation report is made publicly available.</li> <li><input checked="" type="checkbox"/> Banking information on the payment of the non-reimbursable registration fee.</li> <li><input checked="" type="checkbox"/> 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 allocation of CERs at issuance.</li> </ul>	

### **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)**

Aços Villares S.A. is a steel company operating three units in Brazil. The project is restricted to the Pindamonhangaba unit, the largest site in Brazil. Pindamonhangaba started operation in 1979, and its core business is the production of steel from scrap metal. It has been using fuel oil, LPG and electricity as the main energy sources for all the processes up to the year 2002. Aços Villares started a fuel switch process from fuel oil, LPG or electricity to natural gas in 2002. The project activity consists of investments to adapt the 48 existing equipment to the use of natural gas instead of fuel oil, LPG or electricity.

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 on 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:

Aços Villares S.A. and EcoSecurities: Project Design Document for the “Aços Villares Natural gas fuel switch project” in Brazil. Version 1 (19 August 2005);

Aços Villares S.A. and EcoSecurities: Project Design Document for the “Aços Villares Natural gas fuel switch project” in Brazil. Version 2 (17 October 2005);

EcoSecurities Datasheet “Villares-ER-and-FA-Calculations.xls”.

Comissão Interministerial de Mudança Global do Clima (DNA of Brazil): Letter of Approval. 09 May 2006

Department for Environment, Food and Rural Affairs (DNA of United Kingdom): Written Approval of Voluntary Participation of UK DNA. 16 May 2006

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 AM0008: “Industrial fuel switching from coal and petroleum fuels to natural gas without extension of capacity and lifetime of the facility”. Version 01 of 15 June 2004.

Brazilian Mines and Energy Ministry: Balanço Energético Nacional - BEN 2004 (Brazilian Energy Data Profile), section 11.01 - Preços e Tarifas - Preços Médios Constantes de Fontes de Energia - U\$/ Unidade Física (tab 7.9)

[http://www.mme.gov.br/site/menu/select\\_main\\_menu\\_item.do?channelId=1432&pageId=4060](http://www.mme.gov.br/site/menu/select_main_menu_item.do?channelId=1432&pageId=4060)

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

Combustible conversion project AVSA (Projeto para conversão de combustível AVSA)

The following persons were interviewed:

Afonso Carvalho Souza – Aços Villares S.A. – Pinda/MNP

Robson Vitor Oliver – Aços Villares S.A. – Pinda/MNP

Herivelto J Rodrigues – Aços Villares S.A. – Pinda/MAE

José Augusto Almeida – Aços Villares S.A. – Pinda/Exe

Gumercindo Muiño – Aços Villares S.A. – Organization Manager

Pablo Fernandez – EcoSecurities

The validation team consisted of the following personnel:

Mr. Luis Filipe Tavares	DNV Rio de Janeiro	Team leader,
Ms. Cintia Dias	DNV Rio de Janeiro	CDM auditor
Mr. Vicente San Valero	DNV Rio de Janeiro	CDM auditor
Mr. K. Chandrashekara	DNV Bangalore	Manufacturing industry sector expert;
Mr. Michael Lehmann	DNV Oslo	Energy sector expert/Technical reviewer

For further details, please refer to the “Introduction” and “References” Sections of DNV’s Validation Report (DNV Report 2005-1171, 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 August 2005. The validation consisted of the following three phases:

- a desk review of the project design documents;
- follow-up interview with project stakeholders;
- the resolution of outstanding issues and the issuance of the 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 27 and 28 September 2005, DNV performed interviews with Aços Villares S.A and EcoSecurities during a site visit at the Pindamonhangaba Plant.

In order to ensure transparency, a validation protocol has been customized 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 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 2005-1171, rev. 02).

For further details, please refer to the “Methodology” Section of DNV’s Validation Report (DNV Report 2005-1171, rev. 02) and the IETA/PCF Validation and Verification Manual ([www.vvmanual.info](http://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 PDD of 19 August 2005 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 31 August 2005 to 29 September 2005. 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 met. 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 “Aços Villares Natural gas fuel switch project” at Pindamonhangaba Municipality, São Paulo 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 Aços Villares S.A. of Brazil and EcoSecurities of the United Kingdom. All Parties involved, i.e., the host Party Brazil and the Annex I Party the United Kingdom meet the requirements to participate in the CDM and have provided written approval of voluntary participation in the project.

Aços Villares S.A.- Pindamonhangaba is a steel company. It has been using fuel oil, LPG and electricity as the main energy sources for all the processes up to the year 2002 when it started a fuel switch process from fuel oil, LPG and electricity to natural gas. The project activity consists of the conversion of existing equipment to the use of natural gas instead of fuel oil, LPG or electricity.

The baseline scenario assumes that fuel oil 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, fuel oil and LPG. While no baseline emissions are accounted for associated with previous electricity consumption, project emissions from combusting natural gas from equipment previously operating with electricity are accounted. This is conservative.

By promoting the use of a more clean fuel, the project is in line with the current sustainable development priorities of Brazil. The DNA of Brazil confirmed that the project assists in achieving sustainable development.

The project applies the approved baseline and monitoring methodology AM0008, i.e. “Industrial fuel switching from coal and petroleum fuels to natural gas without extension of capacity and lifetime of the facility”. The baseline methodology has been applied correctly and the assumptions made for the selected baseline scenario are sound. 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 project’s application of the methodology is correct and the determination of the baseline is transparent and IPCC default emission factors are applied. The calculation of the fuel oil efficiency was based on steam and heavy oil and LFG consumption measurements of the equipment prior to the fuel switch. Appropriate estimates on future fuel consumption 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. According to the monitoring plan, the fuel efficiency of natural gas will have to be determined as a curve of fuel efficiency vs. load factor with

statistical significance once at an early stage of the project in accordance with AM0008.

Local stakeholder comments were invited according to the Brazilian DNA Resolution 1. One comment was received from Brazilian NGO Forum supporting the way stakeholders were consulted. Public stakeholder input has also been invited via the UNFCCC web-site, but no comments have been received.

In summary, it is DNV's opinion that the "Aços Villares Natural gas fuel switch project", as described in the revised and resubmitted project design document of October 2005, meets all relevant UNFCCC requirements for the CDM and all relevant host country criteria and correctly applies the baseline and monitoring methodology AM0008. Hence, DNV requests the registration of the "Aços Villares 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 2005-1171, 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.

Name of authorized officer signing for the DOE Michael Lehmann

Date and signature for the DOE

12 June 2006

*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