VALIDATION REPORT

AÇOS VILLARES NATURAL GAS FUEL SWITCH PROJECT IN BRAZIL

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DET NORSKE VERITAS

VALIDATION REPORT

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Client: Aços Villares S.A.	Client ref.: Gumersindo Muiño

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Summary:
Det Norske Veritas Certification Ltd. (DNV) has performed a validation of the "Aços Villares Natural gas fuel switch project " project in Brazil, on the basis of UNFCCC criteria for the CDM, 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, the simplified modalities and procedures for small-scale CDM project activities and the subsequent decisions by the CDM Executive Board.
This validation report summarizes the findings of the validation.
The validation consisted of the following three phases: i) a desk review of the project design documents, ii) follow-up interviews with project stakeholders and iii) the resolution of outstanding issues and the issuance of the final validation report and opinion.
In summary, it is DNV's opinion that the Aços Villares Natural gas fuel switch project as described in the revised PDD of 04 January 2007, meets all relevant UNFCCC requirements for the CDM and all relevant host country criteria and correctly applies the "Indicative simplified baseline and monitoring methodologies for selected small-scale CDM project activity categories Type III B – Switching fossil fuels". Hence, DNV will request the registration of the Aços Villares Natural gas fuel switch project as a CDM project activity.
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.

Report No.: 2005-1171	Subject Group: Environment	
Report title: Aços Villares Natural gas fuel switch project in Brazil		
Work carried out by: Luis Filipe Tavares, Marco A. Ratton, K. Chandrashekara		
Work verified by: Michael Lehmann		
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Abbreviations

BEN	Balanço Energético Nacional (Brazilian Energy Data Profile)
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CEF	Carbon Emission Factor
CER	Certified Emission Reduction
CH_4	Methane
CL	Clarification request
CO_2	Carbon dioxide
CO_2e	Carbon dioxide equivalent
DNV	Det Norske Veritas
DNA	Designated National Authority
GHG	Greenhouse gas(es)
GWP	Global Warming Potential
IPCC	Intergovernmental Panel on Climate Change
MP	Monitoring Plan
N_2O	Nitrous oxide
NGO	Non-governmental Organisation
ODA	Official Development Assistance
PDD	Project Design Document
UNFCCC	United Nations Framework Convention on Climate Change

1 INTRODUCTION

Aços Villares S.A. and Ecosecurities has commissioned Det Norske Veritas Certification Ltd. (DNV) to validate the Aços Villares Natural gas fuel switch project at Pindamonhangaba Municipality; São Paulo State, Brazil, (hereafter called "the project").

This report summarises the findings of the validation of the project, performed on the basis of UNFCCC and host Party criteria for CDM projects, as well as criteria given to provide for consistent project operations, monitoring and reporting.

The validation team consists of the following personnel:

Mr. Luis Filipe Tavares	DNV Rio de Janeiro	CDM Validator/Team leader
Mr. Marco A. Ratton	DNV Rio de Janeiro	GHG auditor
Mr. K. Chandrashekara	DNV Bangalore	Manufacturing industry sector expert
Mr. Michael Lehmann	DNV Oslo	Technical reviewer

1.1 Validation Objective

The purpose of a validation is to have an independent third party assess the project design. In particular, the project's baseline, the monitoring plan, and the project's compliance with relevant UNFCCC and host Party criteria are validated in order to confirm that the project design as documented is sound and reasonable and meets the identified criteria. Validation is a requirement for all CDM projects and is seen as necessary to provide assurance to stakeholders of the quality of the project and its intended generation of certified emission reductions (CERs).

1.2 Scope

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 and the relevant decisions by the CDM Executive Board. The validation team has, based on the recommendations in the Validation and Verification Manual /5/, and employed a risk-based approach, 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 project participants. However, stated requests for clarifications and/or corrective actions may have provided input for improvement of the project design.

1.3 Description of Proposed CDM Project

Aços Villares S.A. is a steel company that operates three units in Brazil. The project in question is restricted to the Pindamonhangaba unit, the largest site in Brazil. The Pindamonhangaba unit 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. The project activity consists of investments to adapt the existing equipment to the use of natural gas instead of fuel oil, LPG or electricity.

The Aços Villares Natural gas fuel switch project started in 01 May 2002, with the first switching natural gas burners on boilers and start the operation on 01 January 2003 according the first natural gas receipt verified during the site visit.

According to Appendix C to the simplified modalities and procedures for small scale CDM project activities, the project is not part of a larger CDM project activity. As verified during the site visit, Villares Pindamonhangaba has only implemented this project with the aim to register under the CDM.

The estimated amount of GHG emission reductions from the project is calculated to be 282 322 tCO_2e during the first 7 years credit period, resulting in an estimated average annual emission reductions of 40 332 tCO_2e.

2 METHODOLOGY

The validation consisted of the following three phases:

I a desk review of the project design documents;
II follow-up interviews with project stakeholders;
III the resolution of outstanding issues and the issuance of the final validation report and opinion.

In order to ensure transparency, a validation protocol was customised for the project, according to the Validation and Verification Manual /5/. 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 different columns in these tables are described in Figure 1.

The completed validation protocol for the Aços Villares Natural gas fuel switch project is enclosed in Appendix A to this report.

Findings established during the validation can either be seen as a non-fulfilment of validation protocol criteria or where a risk to the fulfilment of project objectives is identified. Corrective action requests (CAR) are issued, where:

i) mistakes have been made with a direct influence on project results;
ii) validation protocol requirements have not been met; or
iii) there is a risk that the project would not be accepted as a CDM project or that emission reductions will not be certified.

The term Clarification may be used where additional information is needed to fully clarify an issue

Validation Protocol Table 1: Mandatory Requirements for CDM Project Activities			
Requirement	***Reference***	***Conclusion***	***Cross reference***
The requirements the project must meet.	*Gives reference to the legislation or agreement where the requirement is found.*	*This is either acceptable based on evidence provided (**OK**), a **Corrective Action Request (CAR)** of risk or non-compliance with stated requirements or a request for **Clarification (CL)** where further clarifications are needed.*	*Used to refer to the relevant checklist questions in Table 2 to show how the specific requirement is validated. This is to ensure a transparent Validation process.*

Validation Protocol Table 2: Requirement Checklist				
Checklist Question	***Reference***	***Means of verification (MoV)***	***Comment***	***Draft and/or Final Conclusion***
The various requirements in Table 1 are linked to checklist questions the project should meet. The checklist is organised in seven different sections. Each section is then further sub-divided. The lowest level constitutes a checklist question.	*Gives reference to documents where the answer to the checklist question or item is found.*	*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).A request for **Clarification (CL)** is used when the validation team has identified a need for further clarification.*

Validation Protocol Table 3: Resolution of Corrective Action Requests and Requests for Clarification			
Draft report corrective action requests and requests for clarifications	***Ref. to Table 2***	***Summary of project participants' response***	***Final conclusion***
If the conclusions from the draft Validation are either a Corrective Action Request or a Clarification Request, these should be listed in this section.	*Reference to the checklist question number in Table 2 where the Corrective Action Request or Clarification Request is explained.*	*The responses given by the project participants during the communications with the validation team should be summarised in this section.*	*This section should summarise the validation team's responses and final conclusions. The conclusions should also be included in Table 2, under "Final Conclusion".*

Figure 1 Validation protocol tables

2.1 Review of Documents

DNV initially reviewed the initial PDD (version 01 of 19 August 2005) /1/ which was submitted by Aços Villares S.A. and EcoSecurities on 09 September 2005 under AM0008 methodology. DNV also reviewed a revised version of the PDD /2/ dated 17 October 2005 which was submitted to address DNV's initial validation findings. On 17 January 2007, the project was re-submitted as a small-scale project: a new PDD /3/ adopting the methodology the "Indicative simplified baseline and monitoring methodologies for selected small-scale CDM project activity categories Type III B – Switching fossil fuels" was submitted and assessed by DNV.

DNV has also reviewed other project documents during the validation, such as the financial calculations and more detailed emission reduction calculations /4/.

2.2 Follow-up Interviews

On 27 and 28 September 2005, DNV performed interviews with Aços Villares S.A and EcoSecurities during a site visit at the Pindamonhangaba plant.

The main topics of the interviews were:

- Efficiency of fuel oil and natural gas consumption (receipts of combustible and steam production);
- Fuel oil and natural gas prices and purchase contracts;
- Capacities of boilers, ovens, heaters and other equipments;
- Additionality of the project;
- Investment made and consideration of the CDM in the decision to implement the project;
- Cash flow analysis and NPV;
- Baseline emission calculations;
- Calibration requirements.

2.3 Resolution of Clarification and Corrective Action Requests

The objective of this phase of the validation is to resolve any outstanding issues which needed to be clarified prior to DNV's positive conclusion on the project design.

The initial validation of the project identified one c*orrective action requests* and five requests for c*larification.* The project participant's responses to the findings presented in DNV's draft validation report were resolved during communications between the project participants and DNV.

The new PDD with the project presented as SSC project has no CAR or CL identified.

To guarantee the transparency of the validation process, the concerns raised are summarised in chapter 3 below and documented in more detail in the validation protocol in Appendix A.

2.4 Internal Quality Control

The draft validation report including the initial validation findings underwent a technical review before being submitted to the project participants. The final validation report underwent another technical review before requesting registration of the project activity. The technical review was performed by a technical reviewer qualified in accordance with DNV's qualification scheme for CDM validation and verification.

3 VALIDATION FINDINGS

The findings of the validation are stated in the following sections. The validation criteria (requirements), the means of verification and the results from validating the identified criteria are documented in more detail in the validation protocol in Appendix A.

The final validation findings relate to the project design as documented and described in the PDD of 04 January 2007 /3/.

3.1 Participation Requirements

The project participants are Aços Villares S.A. from Brazil and EcoSecurities Ltd from the United Kingdom. The host Party is Brazil and the Annex I Party is the United Kingdom. Both Parties meet all relevant participation requirements.

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.

3.2 Project Design

The project activity is a fuel switch project that is based on the conversion of 48 different types of equipment. The equipment conversions represent adaptations and modifications on plant equipment in order to allow the use of natural gas instead of fuel oil and LPG.

This process will not increase the lifetime of equipment or the production capacity significantly. The equipment is expected to last at least 21 more years due to:

1) The long lifetime of equipment in the industry as a whole, and the robustness of the equipment design, is a characteristic for most steel plants. When an investment is made the equipment is thus likely to operate for a long time.

2) Strict maintenance procedures regulated by ISO standards and procedures are in place. As the same reason as for the investment, such maintenance procedures assure a long operation range; this is likely to reduce operational interruptions.

3) In a 25-year assessment of the boilers, which was carried out in December 2004, the equipment was assessed to be in excellent condition as verified on periodical inspection reports.

4) As verified during the site visit, the fuel switch was done as a separate process to the maintenance requirements or any other retrofit activities.

The equipment included in the project activity is:

Villares Code	Name	Nominal capacity	Nominal Energy Consumption
UP 300- 1 and 2	Boilers Keystone 11M	19.8 tons steam/hr	12 740 000 kcal/hr
UP 520- 1, 2, 3, 4, 7	Ladle heater	80 tons/hr	1 200 000 kcal/hr
UP 530 – 2 to 5	ToTo Oven	100 tons/hr	1 100 000 kcal/hr
UP 530 – 6	ToTo Oven	200 tons/hr	9 000 000 kcal/hr
UP 530- 9	Heating furnace F1	130 tons/hr	5 880 000 kcal/hr
UP 530- 10 and 12	Heating furnace F2 F4	250 tons/hr	10 872 000 kcal/hr
UP 600 - 1to 10	Soaking pit	45 tons/hr	3 000 000 kcal/hr

UP 600 – 12	Oven	90 tons/hr	34 800 000 kcal/hr
UP 600 –13	Bars heat treating furnace	44 tons/hr	3 870 000 kcal/hr Electricity
UP 630 – 1 and 2	Annealing furnace	20 tons/hr	1 200 000 kcal/hr
UP 710 – 1 and 2	Ladle heater	5 tons/hr	500 000 kcal/hr
UP 710 – 3	Ladle heater	15 tons/hr	1 000 000 kcal/hr
UP 710 – 4	Ladle heater	25 tons/hr	1 000 000 kcal/hr
UP 710 – 6, 7, 8	Stove FH	120 tons/hr	1 500 000 kcal/hr
UP 720 – 1 to 7	ToTo Oven	100 tons/hr	1 100 000 kcal/hr
UP 730 – 1 to 5	ToTo Oven	78 tons/hr	3 224 620 kcal/hr

3.3 Baseline Determination

The project applies the "Indicative simplified baseline and monitoring methodologies for selected small-scale CDM project activity categories Type III B – Switching fossil fuels" /4/.

The project complies with paragraph 28 of decision CMP.2 considering that the annual emissions reduction are estimated at 40 332tCO_2e, than less than the 60 ktCO_2e stipulated as threshold for this project category.

The category III.B. is applicable since the project involves switching of fuel oil and LPG by natural gas on heats, ovens, furnaces and boilers at Villares - Pindamonhangaba.

The project's application of the methodology is correct and the determination of the baseline is transparent considering IPCC default emission factors.

The project establishes fuel efficiency factors for each class of equipment and the respective fuels for both the baseline and project emission calculations.

3.4 Additionality

In According to *Attachment A* to *Appendix B* of the simplified modalities and procedures for CDM small scale project activities, evidence as to why the proposed project is additional can be shown by conducting an analysis of any of the following: (a) investment barriers, (b) technological barriers, (c) prevailing practice and (d) other barriers. Evidence to why the project is additional is offered under the following categories of barrier: **(a) Investment/Financial barrier, (c) prevailing practice and (d) Other barriers**.

a) *Investment/Financial barrier:* According to the cash flow analysis, this demonstrates a negative NPV, considering the appropriate discount rate in Brazil. An analysis was carried out using a discount rate of 18%, which is deemed reasonable since the government bond rate according to the Brazilian Central Bank was around 19% in the year 2002. The calculations made in the "Villares-ER-and-FA-Calculations" /4/ demonstrated the NPV of the project is less attractive than the NPV of the baseline, i.e. there is a difference of –R$ 5 024 016[*] between the NPV of fuel oil/LPG and the NPV of natural gas considering the average prices (2000-2001) of fuel oil of R$ 0.00759/kJ, LPG R$ 0.01127/kJ and natural gas R$ 0.0856/kJ. During the site visit, several purchase receipts of heavy oil, LPG and natural gas were verified, confirming the prices referred in the PDD and justifying the assumptions made in the NPV analysis. The trends in fuel oil and natural gas consumption in Brazil and the sector were analyzed and DNV has been able to confirm the appropriateness of the analysis. Moreover, the influence of possibly

[*] 1 US Dollar = 2,4 Reais in October 2005.

higher natural gas efficiency was considered in the NPV sensitivity analysis given in the PDD and the supporting financial analysis /4/. The sensitivity analysis demonstrated the NPV of the project remains less attractive than the NPV of the baseline scenario.

b) *Prevailing Practice*: As verified during the site visit, Villares – Pindamonhangaba implemented the natural gas as fuel in 2002, before the other industries in the region did the same. There was a resistance to the use of natural gas by other industries, mainly due to uncertainties of supply of natural gas and also related to the Brazilian price policy for natural gas. As the price and investment represent higher cost compared with fuel oil, the switching was not likely as a first option.

c) Other Barrier: The risk of natural gas supply interruption is not a significant barrier. However, there is always the risk of an accident on pipeline. In addition the gas sourcing conditions are complex, given that more than 50% of all natural gas consumed in Brazil is supplied by Bolivia, which has several social pressures on its government. Such aspects pose potential risks to the continuity of natural gas supply.

In order to evidence that Aços Villares S.A. took the CDM into consideration in the implementation of the project, Aços Villares S.A. sent to DNV a letter of the Purchase Department to the Industrial Director of Aços Villares S.A. This was issued on 12 June 2001 and makes references to contacts and meetings with a gas supply company, a fuel oil company, and Ecosecurities (consultancy), including discussions about the possibility of implementing the project as CDM project activity. Another letter from the President of Aços Villares S.A., Mr. José Maria Montero, which was issued on 26 February 2002, approving the investment for switching the fuel oil to natural gas and emphasizing the interest of Sidenor, (the main shareholder of Aços Villares S.A.) to implement the project as CDM project activity.

Provided the information above, it is deemed demonstrated that the project is not a likely baseline scenario and emission reductions occurring from the project can thus be considered additional.

3.5 Monitoring Plan

The project correctly applies the “Indicative simplified baseline and monitoring methodologies for selected small-scale CDM project activity categories Type III B – Switching fossil fuels”..

The monitoring methodology considers monitoring emission reductions generated from switching from fuel oil combustion to natural gas at the Aços Villares - Pindamonhangaba heating equipments. The monitoring plan for emission reductions occurring within the project boundary are based on measuring the natural gas consumption through individual instruments identified in Annex 4 (Monitoring Plan) of PDD /3/.

The monitoring plan includes the determination of the fuel efficiency of natural gas for each class of equipment vs. a load factor applying statistical significant numbers.

Details of the data to be collected, the frequency of data recording, its certainty, and format and storage location are described. Algorithms and formulae used have also been clearly established. The recording frequency of the data is appropriate for the project.

Aços Villares - Pindamonhangaba is responsible for the project management monitoring and reporting of emission reductions as well as for organising and training of the staff in the

appropriate monitoring, measurement and reporting techniques through the Internal Commission to Energy Conservation (CICE) and Utilities department at Aços Villares - Pindamonhangaba.

The monitoring plan is straightforward and no specific procedures (including QA/QC procedures) beyond the ones applicable for the already established ISO 9001 certified quality management system are necessary. The established measures reflect good monitoring and reporting practices.

3.6 Calculation of GHG Emissions

Details of direct and indirect emissions are adequately discussed and calculations and their derivative formulas are derived from internationally recognised IPCC standards. The GHG emissions considered are:

- carbon dioxide emissions (CO_2) from combustion of natural gas (project activity) and fuel oil (baseline),

CO_2 emission factors for the different fuels were derived from the natural gas distributor COMGAS (natural gas) and from the Brazilian Energy Balance 2003 (Fuel oil and LPG). One equipment switched from electricity to natural gas. While no baseline emissions are accounted for associated with electricity consumption of this equipment, project emissions from combusting natural gas in this equipment are taken into account. This is deemed conservative.

The estimates of 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 *ex-ante* estimates made are deemed appropriate, as there is no capacity increase involved.

3.7 Environmental Impacts

Considering the nature of the project, there are no adverse environmental impacts expected. Aços Villares - Pindamonhangaba has been granted an Operation Environmental License (number 300922 issued on 23 August 2002) by the environmental agency of São Paulo state (CETESB-Companhia de Tecnologia e Saneamento Ambiental), and applied to up-grade the General Operation Environment Licence on 14/03/2005.

3.8 Comments by Local Stakeholders

Aços Villares–Pindamonhangaba and EcoSecurities invited local stakeholders, such as the Municipal Government, the state and municipal entities, the Brazilian Forum of NGOs, neighbouring communities and the office of the attorney general, to provide comments for Aços Villares-Pindamonhangaba project on 25 August 2005, according to the Resolution 1 of the Brazilian DNA. Only one comment was received and it was from the Brazilian Forum of NGOs, which expressed its support of the way stakeholders were consulted. During the site visit all the invitation letters and the post receipts were presented.

4 COMMENTS BY PARTIES, STAKEHOLDERS AND NGOS

The PDD of 04 January 2007 was made publicly available on DNV's climate change website (www.dnv.com/certification/climatechange) and Parties, stakeholders and NGOs were through

the CDM website invited to provide comments during a 30 days period from 19 January 2007 to 19 February 2007. No comment was received.

Prior to this, The PDD of 19 August 2005, 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 August 2005 to 29 September 2005. This earlier call did not receive any comment either.

5 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 Ltd of the United Kingdom. The host Party is Brazil, while the Annex I Party is the United Kingdom. Both Parties meet all relevant participation requirements.

Aços Villares S.A.- Pindamonhangaba is a steel company. It has been using fuel oil, LPG 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 oil and LPG.

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

The project applies the "Indicative simplified baseline and monitoring methodologies for selected small-scale CDM project activity categories Type III B – Switching fossil fuels". 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.

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 SSC methodology Type III.B.

Local stakeholder comments were invited according to the Brazilian DNA Resolution 1. Only one comment was received and it was from the Brazilian Forum of NGOs, which expressed its support of the way stakeholders were consulted. Public stakeholders were also invited for providing inputs via the UNFCCC website, 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 04 January 2007, 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 will request the registration of the Aços Villares Natural gas fuel switch project as a CDM project activity.

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.

REFERENCES

Documents provided by the project proponent that relate directly to the project:

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

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

/3/ Aços Villares S.A. and EcoSecurities: Project Design Document for the Aços Villares Natural gas fuel switch project . Version 3 (04 January 2007);

/4/ EcoSecurities Datasheet "Villares-ER-and-FA-Calculations.V23

Background documents related to the design and/or methodologies employed in the design or other reference documents:

/5/ International Emission Trading Association (IETA) & the World Bank's Prototype Carbon Fund (PCF): *Validation and Verification Manual*. http://www.vvmanual.info

/6/ 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*. Type III.B Version 10: 23 December 2007.

Persons interviewed during the validation, or persons who contributed with other information that are not included in the documents listed above:

/7/ Afonso Carvalho Souza – Aços Villares S.A. – Pinda/MNP

/8/ Robson Vitor Oliver – Aços Villares S.A. – Pinda/MNP

/9/ Heriveldo J Rodrigues – Aços Villares S.A. – Pinda/MAE

/10/ José Augusto Almeida – Aços Villares S.A. – Pida/Exe

/11/ Gumercindo Muiño – Aços Villares S.A. – Organizarion Manager

/12/ Pablo Fernandez – EcoSecurities

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APPENDIX A

VALIDATION PROTOCOL
FOR SMALL-SCALE CDM PROJECT ACTIVITIES

Table 1 Mandatory Requirements for Small Scale Clean Development Mechanism (CDM) Project Activities

Requirement	Reference	Conclusion	Cross Reference/ Comment
1. The project shall assist Parties included in Annex I in achieving compliance with part of their emission reduction commitment under Art. 3	Kyoto Protocol Art. 12.2	OK	Table 2, Section E.4
2. The project shall assist non-Annex I Parties in achieving sustainable development and shall have obtained confirmation by the host country thereof	Kyoto Protocol Art. 12.2, Simplified Modalities and Procedures for Small Scale CDM Project Activities §23a	-	Table 2, Section A.3 Prior to the submission of this validation report to the CDM Executive Board, DNV will have to receive the written confirmation by the DNA of Brazil that the project assists in achieving sustainable development
3. The project shall assist non-Annex I Parties in contributing to the ultimate objective of the UNFCCC	Kyoto Protocol Art. 12.2.	OK	Table 2, Section E.4
4. The project shall have the written approval of voluntary participation from the designated national authority of each party involved	Kyoto Protocol Art. 12.5a, Simplified Modalities and Procedures for Small Scale CDM Project Activities §23a	-	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.
5. The emission reductions should be real, measurable and give long-term benefits related to the mitigation of climate change	Kyoto Protocol Art. 12.5b	OK	Table 2, Section E.1 to E.4
6. Reduction in GHG emissions must be additional to any that would occur in absence of the project activity, i.e. a CDM project activity is additional if anthropogenic emissions of greenhouse gases by sources are reduced below those that would have occurred in the absence of the registered CDM project activity	Kyoto Protocol Art. 12.5.c, Simplified Modalities and Procedures for Small Scale CDM Project Activities §26	OK	Table 2, Section B.2.1

Requirement	Reference	Conclusion	Cross Reference/ Comment
7. In case public funding from Parties included in Annex I is used for the project activity, these Parties shall provide an affirmation that such funding does not result in a diversion of official development assistance and is separate from and is not counted towards the financial obligations of these Parties.	Decision 17/CP.7, CDM Modalities and Procedures Appendix B, § 2	OK	The validation did not reveal any information that indicates that the project can be seen as a diversion of ODA funding towards Brazil.
8. Parties participating in the CDM shall designate a national authority for the CDM	CDM Modalities and Procedures § 29	OK	The Brazilian DNA is the Comissão Interministerial de Mudança Global do Clima. The UK DNA is the Department for Environment, Food and Rural Affairs.
9. The host Party and the participating Annex I Party shall be a Party to the Kyoto Protocol	CDM Modalities and Procedures § 30, 31b	OK	Brazil has ratified the Kyoto Protocol on 23 August 2002. UK has ratified the Kyoto Protocol on 31 May 2002.
10. The participating Annex I Party's assigned amount shall have been calculated and recorded	CDM Modalities and Procedures §31b	OK	UK calculated and recorded its assigned amount units.
11. The participating Annex I Party shall have in place a national system for estimating GHG emissions and a national registry in accordance with Kyoto Protocol Article 5 and 7	CDM Modalities and Procedures §31b	OK	UK has in place a national registry and reported in October 2001 their 3rd communication.
12. The proposed project activity shall meet the eligibility criteria for small scale CDM project activities set out in § 6 (c) of the Marrakesh Accords and shall not be a debundled component of a larger project activity	Simplified Modalities and Procedures for Small Scale CDM Project Activities §12a,c	OK	Table 2, Section A.1 The project comply with paragraph 28 of decision CMP.2
13. The project design document shall conform with the Small Scale CDM Project Design Document format	Simplified Modalities and Procedures for Small Scale CDM Project Activities, Appendix A	OK	PDD is in accordance with CDM-SSC-PDD (version 03 of 22 December 2006).

Requirement	Reference	Conclusion	Cross Reference/ Comment
14. The proposed project activity shall confirm to one of the project categories defined for small scale CDM project activities and uses the simplified baseline and monitoring methodology for that project category	Simplified Modalities and Procedures for Small Scale CDM Project Activities §22e	OK	Table 2, Section A.1.3, B and D
15. Comments by local stakeholders are invited, and a summary of these provided	Simplified Modalities and Procedures for Small Scale CDM Project Activities §22b	OK	Table 2, Section G
16. If required by the host country, an analysis of the environmental impacts of the project activity is carried out and documented	Simplified Modalities and Procedures for Small Scale CDM Project Activities §22c	OK	Table 2, Section F
17. Parties, stakeholders and UNFCCC accredited NGOs have been invited to comment on the validation requirements and comments have been made publicly available	Simplified Modalities and Procedures for Small Scale CDM Project Activities §23b,c,d	OK	The PDD of 04 January 2007 was published for public comments in the period of 19 January 2007 to 17 Febrruary 2007 on www.dnv.com/certification/ClimateChange and comments were invited via the UNFCCC CDM website. No comment was received.

Table 2 Requirements Checklist

Checklist Question	Ref.	MoV*	Comments	Draft Concl.	Final Concl.
A. **Project Description** The project design is assessed.					
A.1. Small scale project activity It is assess whether the project qualifies as small scale CDM project activity.					
A.1.1. Does the project qualify as a small scale CDM project activity as defined in paragraph 6 (c) of decision 17/CP.7 on the modalities and procedures for the CDM?	/3/	DR	The project comply with paragraph 28 of decision CMP.2 consider the emissions reduction are only 40 332, than less than 60 kt CO_2e annually		OK
A.1.2. The small scale project activity is not a debundled component of a larger project activity?	/3/	DR	According Appendix C to the simplified modalities and procedures for the small scale CDM project activities the project is not part of larger CDM project activity and as verified during the site visit Villares Pindamonhangaba has only this CDM project.		OK
A.1.3. Does proposed project activity confirm to one of the project categories defined for small scale CDM project activities?	/3/	DR	The project applies the “Indicative simplified baseline and monitoring methodologies for selected small-scale CDM project activity categories Type III B – Switching fossil fuels”. The category III.B. is applicable as the project switching fuel oil and LPG by natural gas on heats, ovens, furnaces and boiler of Villares - Pindamonhangaba		OK

* MoV = Means of Verification, DR= Document Review, I= Interview

Checklist Question	Ref.	MoV*	Comments	Draft Concl.	Final Concl.
A.2. Project Design Validation of project design focuses on the choice of technology and the design documentation of the project.					
A.2.1. Are the project's spatial (geographical) boundaries clearly defined?	/3/	DR/I	The project boundaries are defined and limited by Aços Villares S.A., steel plant, at the Pindamonhangaba Municipality.		OK
A.2.2. Are the project's system (components and facilities used to mitigate GHG's) boundaries clearly defined?	/3/	DR/I	The project system boundaries are limited to 2 boilers, 9 ladle heaters, 17 ovens, 2 Annealing furnaces, 1 bars heat treating furnace, 3 heating furnaces, 1 soaking pit, 3 stoves and natural gas distribution and control system.		OK
A.2.3. Does the project design engineering reflect current good practices?	/3/	DR	The project contemplates the conversion of existing equipments from fuel oil, LPG and electricity to natural gas and includes complementary safety conditions.		OK
A.2.4. Will the project result in technology transfer to the host country?	/3/	DR	The switching fuel from fuel oil and LGP to natural gas is common technology by the manufacturer of boilers, ovens and furnaces		OK
A.2.5. Does the project require extensive initial training and maintenance efforts in order to work as presumed during the project period? Does the project make provisions for meeting training and maintenance needs?	/3/	DR	The project will require minimal additional training for the project maintenance since the fuel change is only a modification of the currently used technology, and Aços Villares already has a technical department at the Pindamonhangaba plant in charge of the equipment maintenance, including the Internal Commission to Energy Conservation (CICE).		OK

* MoV = Means of Verification, DR= Document Review, I= Interview

Checklist Question	Ref.	MoV*	Comments	Draft Concl.	Final Concl.
A.3. Contribution to Sustainable Development The project's contribution to sustainable development is assessed					
A.3.1. Will the project create other environmental or social benefits than GHG emission reductions?	/3/	DR	The natural gas has no sulphur contend compared with fuel oil, so no SOx is emitted to atmosphere		OK
A.3.2. Will the project create any adverse environmental or social effects?	/3/	DR	NO		OK
A.3.3. Is the project in line with sustainable development policies of the host country?	/3/	DR	By using an environmentally friendlier fuel, the project is in line with current sustainable development priorities in Brazil.		OK
A.3.4. Is the project in line with relevant legislation and plans in the host country?	/3/	DR	Yes		OK
B. **Project Baseline** The validation of the project baseline establishes whether the selected baseline methodology is appropriate and whether the selected baseline represents a likely baseline scenario.					
B.1. Baseline Methodology It is assessed whether the project applies an appropriate baseline methodology.					
B.1.1. Is the selected baseline methodology in line with the baseline methodologies provided for the relevant project category?	/3/	DR	The project applies the "Indicative simplified baseline and monitoring methodologies for selected small-scale CDM project activity categories Type III B – Switching fossil fuels".		OK
B.1.2. Is the baseline methodology applicable to the project being considered?	/3/	DR	The category III.B. is applicable as the project switching fuel oil and LPG by natural gas on heats,		OK

Checklist Question	Ref.	MoV*	Comments	Draft Concl.	Final Concl.
			ovens, furnaces and boiler of Villares - Pindamonhangaba		
B.2. Baseline Determination It is assessed whether the project activity itself is not a likely baseline scenario and whether the selected baseline represents a likely baseline scenario.					
B.2.1. Is it demonstrated that the project activity itself is not a likely baseline scenario due to the existence of one or more of the following barriers: investment barriers, technology barriers, barriers due to prevailing practice or other barriers?	/3/	DR	In According to *Attachment A* to *Appendix B* of the simplified modalities and procedures for CDM small scale project activities, evidence as to why the proposed project is additional can be shown by conducting an analysis of any of the following: (a) investment barriers, (b) technological barriers, (c) prevailing practice and (d) other barriers. Evidence to why the Project is additional is offered under the following categories of barrier: **(a) Investment/Financial barrier, (c) prevailing practice and (d) Other barriers**. a) *Investment/Financial barrier:* According to the cash flow analysis, shall evidence a negative NPV, considering an appropriate discount rate in Brazil. An analysis was carried out using a discount rate of 18% which is deemed reasonable since the government bond rate was around 19% in the year 2002 according to the Brazilian Central Bank. The calculations made in the "Villares-ER-and-FA-Calculations" /4/ demonstrated the NPV of the project is less		OK

Checklist Question	Ref.	MoV*	Comments	Draft Concl.	Final Concl.
			attractive than the NPV of the baseline, i.e. there is a difference of –R$ 5 024 016[*] between the NPV of fuel oil/LPG and NPV of natural gas considering the average prices (2000-2001) of fuel oil of R$ 0.00759/kJ, LPG R$ 0.01127/kJ and natural gas R$ 0.0856/kJ. During the site visit, several purchase receipts of heavy oil, LPG and natural gas were verified, confirming the prices considered in PDD and justifying the assumptions made in the NPV analysis. The trends in fuel oil and natural gas consumption in Brazil and sector were analyzed and DNV was able to confirm the appropriateness of the analysis. Moreover, the influence of possibly higher natural gas efficiency was considered in the NPV sensitivity analysis given in the PDD and the supporting financial analysis /4/. The sensitivity analysis demonstrated the NPV of the project remains less attractive than the NPV of the baseline scenario. b) Prevailing Practice: As verified during the site visit, Villares – Pindamonhangaba implemented the natural gas as fuel in 2002, before the other industries in the region. There was a resistance to the use of natural gas by other industries mainly due to uncertainties of supply of natural gas and also the Brazilian price policy for natural gas. As the price and investment represent higher cost compared with fuel oil, the switching was not likely in a first analysis.		

[*] 1 US Dollar = 2,4 Reais in October 2005.

Checklist Question	Ref.	MoV*	Comments	Draft Concl.	Final Concl.
			c) Other Barrier: The risk of natural gas supply interruption is not a significant barrier. However, there is always the risk of accident on pipeline. In addition the sourcing condition are complex, given that more than 50% of all natural gas consumed in Brazil is supplied by Bolivia, which has several social pressure on local government. Such aspects pose potential risks to the continuously supply of natural gas. In order to evidence that Aços Villares S.A. took into consideration the CDM in the implementation of the project, Aços Villares S.A. sent to DNV a letter of the Purchase Department to the Industrial Director of Aços Villares S.A. issued on 12 June 2001 with references to contacts and meeting with a gas supply company, a fuel oil company, and Ecosecurities (consultancy), including discussions about the possibility of implement the project as CDM project activity. Another letter from the President of Aços Villares S.A. , Mr. José Maria Montero, which was issued on 26 February 2002, approves the investment for switching the fuel oil to natural gas and emphasizes the interest of Sidenor, (the main shareholder of Aços Villares S.A.) to implement the project as CDM project activity. Hence, it is demonstrated that the project is not a likely baseline scenario and that emission reductions can be considered additional.		
B.2.2. Is the application of the baseline methodology and the discussion and determination of the chosen baseline	/3/	DR	Yes		OK

Checklist Question	Ref.	MoV*	Comments	Draft Concl.	Final Concl.
transparent and conservative?					
B.2.3. Are relevant national and/or sectoral policies and circumstances taken into account?	/3/	DR	Yes		OK
B.2.4. Is the baseline selection compatible with the available data?	/3/	DR	Yes		OK
B.2.5. Does the selected baseline represent the most likely scenario describing what would have occurred in absence of the project activity?	/3/	DR	Yes		OK
C. **Duration of the Project / Crediting Period** It is assessed whether the temporary boundaries of the project are clearly defined.					
C.1.1. Are the project's starting date and operational lifetime clearly defined?	/3/	DR	Yes, the project start date is 01/01/2003 with an expected lifetime 25 years. The project's starting data has been sufficiently evidenced.		OK
C.1.2. Is the assumed crediting time clearly defined (renewable crediting period of seven years with two possible renewals or fixed crediting period of 10 years with no renewal)?	/3/	DR	Yes, a renewable 7 year-crediting period starting on 01/01/2003 is selected.		OK

Checklist Question	Ref.	MoV*	Comments	Draft Concl.	Final Concl.
D. **Monitoring Plan** The monitoring plan review aims to establish whether all relevant project aspects deemed necessary to monitor and report reliable emission reductions are properly addressed.					
D.1. Monitoring Methodology It is assessed whether the project applies an appropriate monitoring methodology.					
D.1.1. Is the selected monitoring methodology in line with the monitoring methodologies provided for the relevant project category?	/3/	DR	The project applies the "Indicative simplified baseline and monitoring methodologies for selected small-scale CDM project activity categories Type III B – Switching fossil fuels".		OK
D.1.2. Is the monitoring methodology applicable to the project being considered?	/3/	DR	Yes		OK
D.1.3. Is the application of the monitoring methodology transparent?	/3/	DR	Yes		OK
D.1.4. Will the monitoring methodology give opportunity for real measurements of achieved emission reductions?	/3/	DR	Yes		OK
D.2. Monitoring of Project Emissions It is established whether the monitoring plan provides for reliable and complete project emission data over time.					
D.2.1. Does the monitoring plan provide for the collection and archiving of all relevant data necessary for estimation or measuring the greenhouse gas emissions within the	/3/	I	The monitoring plan provides a detailed description of how natural gas consumption data will be used to calculate emissions (See section D.1.3). In addition, examples are given of the algorithms		OK

Checklist Question	Ref.	MoV*	Comments	Draft Concl.	Final Concl.
project boundary during the crediting period?			that will be used to process the data. The algorithms used follows well recognised formulas.		
D.2.2. Are the choices of project GHG indicators reasonable?	/3/	DR	Yes		OK
D.2.3. Will it be possible to monitor / measure the specified project GHG indicators?	/3/	DR	Yes		OK
D.2.4. Will the indicators give opportunity for real measurements of project emissions?	/3/	DR	Yes		OK
D.3. Monitoring of Leakage If applicable, it is assessed whether the monitoring plan provides for reliable and complete leakage data over time.					
D.3.1. Does the monitoring plan provide for the collection and archiving of all relevant data necessary for determining leakage?	/3/	I	The methodology III.B don't consider leakage		OK
D.4. Monitoring of Baseline Emissions It is established whether the monitoring plan provides for reliable and complete project emission data over time.					
D.4.1. Does the monitoring plan provide for the collection and archiving of all relevant data necessary for determining baseline emissions during the crediting period?	/3/	I	Yes. The monitoring plan considers the consumption of natural gas and the measure of each output (steam, steel plates etc.). The calculation considers each emission factor for the groups of equipments.		OK
D.4.2. Is the choice of baseline indicators, in particular for baseline emissions, reasonable?	/3/	DR	Yes		OK

Checklist Question	Ref.	MoV*	Comments	Draft Concl.	Final Concl.
D.4.3. Will it be possible to monitor / measure the specified baseline indicators?	/3/	DR	Baseline indicators will be indirectly monitored through measuring natural gas consumption and through monitoring equipment efficiencies. The model assumes that the equivalent amount of energy provided by fuel oil and LPG is being displaced by the same amount of energy provided by natural gas (including efficiency improvements resulting from the fuel switch).		OK
D.4.4. Will the indicators give opportunity for real measurements of baseline emissions?	/3/	DR	See D.4.3		OK
D.5. Project Management Planning It is checked that project implementation is properly prepared for and that critical arrangements are addressed.					
D.5.1. Is the authority and responsibility of project management clearly described?	/3/	DR/I	Aços Villares-Pindamonhangaba is responsible by the conditions established on operational and management structure.		OK
D.5.2. Is the authority and responsibility for registration monitoring measurement and reporting clearly described?	/3/	DR/I	Aços Villares-Pindamonhangaba has in place, a complete set of maintenance and operations procedures, which are in line with company policies and engineering best practices and include the monitoring of process variables, instruments calibration and quality control. These practices are assured by the Internal Commission to Energy Conservation – CICE and by ISO 9001 Certified Quality Management System.		OK
D.5.3. Are procedures identified for training of monitoring personnel?	/3/	DR/I	See D.6.2		OK
D.5.4. Are procedures identified for emergency	/3/	DR/I	See D.6.2		OK

Checklist Question	Ref.	MoV*	Comments	Draft Concl.	Final Concl.
preparedness for cases where emergencies can cause unintended emissions?					
D.5.5. Are procedures identified for calibration of monitoring equipment?	/3/	DR/I	See D.6.2		OK
D.5.6. Are procedures identified for maintenance of monitoring equipment and installations?	/3/	DR/I	See D.6.2		OK
D.5.7. Are procedures identified for monitoring, measurements and reporting?	/3/	DR/I	See D.6.2		OK
D.5.8. Are procedures identified for day-to-day records handling (including what records to keep, storage area of records and how to process performance documentation)	/3/	DR/I	See D.6.2		OK
D.5.9. Are procedures identified for dealing with possible monitoring data adjustments and uncertainties?	/3/	DR/I	See D.6.2		OK
D.5.10. Are procedures identified for internal audits of GHG project compliance with operational requirements as applicable?	/3/	DR/I	See D.6.2		OK
D.5.11. Are procedures identified for project performance reviews?	/3/	DR/I	See D.6.2		OK
D.5.12. Are procedures identified for corrective actions?	/3/	DR/I	See D.6.2		OK

Checklist Question	Ref.	MoV*	Comments	Draft Concl.	Final Concl.
E. **Calculation of GHG emission** It is assessed whether all material GHG emission sources are addressed and how sensitivities and data uncertainties have been addressed to arrive at conservative estimates of projected emission reductions.					
E.1. Project GHG Emissions The validation of ex-ante estimated project GHG emissions focuses on transparency and completeness of calculations.					
E.1.1. Are all aspects related to direct and indirect project emissions captured in the project design?	/3/	DR	The methodology consider only the emissions of CO_2 from fuel consumption		OK
E.1.2. Have all relevant greenhouse gases and sources been evaluated?	/3/	DR	See E.1.1		OK
E.1.3. Do the methodologies for calculating project emissions comply with existing good practice?	/3/	DR	Yes		OK
E.1.4. Are the calculations documented in a complete and transparent manner?	/3/	DR	Yes, the calculation is available on complementary file “EcoSecurities Datasheet “Villares-ER-and-FA-Calculations.V23”		OK
E.1.5. Have conservative assumptions been used?	/3/	DR	Yes		OK
E.1.6. Are uncertainties in the project emissions estimates properly addressed?	/3/	DR	Yes		OK

Checklist Question	Ref.	MoV*	Comments	Draft Concl.	Final Concl.
E.2. Leakage It is assessed whether there leakage effects, i.e. change of emissions which occurs outside the project boundary and which are measurable and attributable to the project, have been properly assessed and estimated ex-ante.					
E.2.1. Are leakage calculation required for the selected project category and if yes, are the relevant leakage effects assessed?	/3/	DR	The methodology III.B don't consider leakage		OK
E.3. Baseline GHG Emissions The validation of ex-ante estimated baseline GHG emissions focuses on transparency and completeness of calculations.					
E.3.1. Are the baseline emission boundaries clearly defined and do they sufficiently cover sources for baseline emissions?	/3/	DR	The boundary is applicable as the project switching fuel oil and LPG by natural gas on heats, ovens, furnaces and boiler of Villares - Pindamonhangaba.		OK
E.3.2. Are all aspects related to direct and indirect baseline emissions captured in the project design?	/3/	DR	The project consider the CO_2 emission reduction related the switching the fuel oil and LGP by natural gas		OK
E.3.3. Have all relevant greenhouse gases and sources been evaluated?	/3/	DR	See E.3.2		OK
E.3.4. Do the methodologies for calculating baseline emissions comply with existing good practice?	/3/	DR	The project's application of the methodology is correct and the determination of the baseline is transparent considering IPCC default emission factors. The project establishes fuel efficiency factors for each class of equipment and respective fuel on		OK

Checklist Question	Ref.	MoV*	Comments	Draft Concl.	Final Concl.
			baseline and on project emissions.		
E.3.5. Are the calculations documented in a complete and transparent manner?	/3/	DR	Yes, the calculation is available on complementary file "EcoSecurities Datasheet "Villares-ER-and-FA-Calculations.V23"		OK
E.3.6. Have conservative assumptions been used?	/3/	DR	The project consider the figures from IPCC		OK
E.3.7. Are uncertainties in the baseline emissions estimates properly addressed?	/3/	DR	The *ex-ante* estimates made are deemed appropriate		OK
E.4. Emission Reductions Validation of ex-ante estimated emission reductions.					
E.4.1. Will the project result in fewer GHG emissions than the baseline case?	/3/	DR	The estimated amount of GHG emission reductions from the project is calculated to be 282 322 tCO2e during the first 7 years credit period, resulting in an estimated average annual emission reductions of 40 332 tCO2e.		OK
***F.* Environmental Impacts** It is assessed whether environmental impacts of the project are sufficiently addressed.					
F.1.1. Does host country legislation require an analysis of the environmental impacts of the project activity?	/3/	DR/I	Considering the nature of the project, there are no adverse environmental impacts expected. Aços Villares-Pindamonhangaba Plant has an Operational Environment Licence and applied to upgrade the General Operation Environment Licence of 14/03/2005. During the site visit the letter 420/05-CBT issued by CETESB was presented, confirming that all Environmental		OK

Checklist Question	Ref.	MoV*	Comments	Draft Concl.	Final Concl.
			Licences, which have expired or will expire, were all included in the process nº 03/00183/05 with reference to the request of general renewal. The switch of fuels to natural gas was included.		
F.1.2. Does the project comply with environmental legislation in the host country?	/3/	DR/I	See F.1.1		OK
F.1.3. Will the project create any adverse environmental effects?	/3/	DR/I	See F.1.1		OK
F.1.4. Have environmental impacts been identified and addressed in the PDD?	/3/	DR/I	See F.1.1		OK
***G.* Comments by Local Stakeholder** Validation of the local stakeholder consultation process.					
G.1.1. Have relevant stakeholders been consulted?	/3/	DR/I	Aços Villares–Pindamonhangaba and EcoSecurities invited local stakeholders, such as the Municipal Government, the state and municipal agencies, the Brazilian forum of NGOs, neighbouring communities and the office of the attorney general, to provide comments for Aços Villares-Pindamonhangaba project on 25 August 2005, according to the Resolution 1 of the Brazilian DNA. One comment was received from Brazilian NGO Forum supporting the way stakeholders were consulted. During the site visit the letters and the receipts were presented.		OK
G.1.2. Have appropriate media been used to invite comments by local stakeholders?	/3/	DR/I	See G.1.1		OK
G.1.3. If a stakeholder consultation process is	/3/	DR/I	See G.1.1		OK

Checklist Question	Ref.	MoV*	Comments	Draft Concl.	Final Concl.
required by regulations/laws in the host country, has the stakeholder consultation process been carried out in accordance with such regulations/laws?					
G.1.4. Is a summary of the comments received provided?	/3/	DR/I	See G.1.1		OK
G.1.5. Has due account been taken of any comments received?	/3/	DR/I	See G.1.1		OK

Table 3 Resolution of Corrective Action and Clarification Requests

Draft report corrective action requests and requests for clarification	Ref. to Table 2	Summary of project participants' response	Final conclusion

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APPENDIX B

CERTIFICATES OF COMPETENCE

CERTIFICATE OF COMPETENCE

Michael Lehmann

Qualification in accordance with DNV's Qualification scheme for CDM/JI (ICP-9-8-i1-CDMJI-i1

GHG Auditor:	Yes		
CDM Validator:	Yes	***JI Validator:***	Yes
CDM Verifier:	Yes	***JI Verifier:***	Yes
Industry Sector Expert for Sectoral Scope(s):	Sectoral scope 1,2,3 & 9		
Technical Reviewer for (group of) methodologies:			
ACM0001, AM0002, AM0003, AM0010, AM0011, AM0012, AMS-III.G	Yes	*AM0021*	Yes
ACM002, AMS-I.A-D, AM0019, AM0026, AM0029	Yes	*AM0023*	Yes
ACM003, ACM0005, AM0033, AM0040	Yes	*AM0024*	Yes
ACM0004	Yes	*AM0027*	Yes
ACM0006, AM0007, AM0015, AM0036, AM0042	Yes	*AM0028, AM0034*	Yes
ACM0007	Yes	*AM0030*	Yes
ACM0008	Yes	*AM0031*	Yes
ACM0009, AM0008, AMS-III.B	Yes	*AM0032*	Yes
AM0006, AM0016, AMS-III.D	Yes	*AM0035*	Yes
AM0009, AM0037	Yes	*AM0038*	Yes
AM0013, AM0022, AM0025, AM00379, AMS-III.H, AMS-III.I	Yes	*AM0041*	Yes
AM0014	Yes	*AM0034*	Yes
AM0017	Yes	*AMS-II.A-F*	Yes
AM0018	Yes	*AMS-III.A*	Yes
AM0020	Yes	*AMS-III.E, AMS-III.F*	Yes

CERTIFICATE OF COMPETENCE

Einar Telnes

Qualification in accordance with DNV's Qualification scheme for CDM/JI (ICP-9-8-i1-CDMJI-i1

GHG Auditor:	Yes		
CDM Validator:	Yes	***JI Validator:***	Yes
CDM Verifier:	Yes	***JI Verifier:***	Yes
Industry Sector Expert for Sectoral Scope(s):	Sectoral scope 1,2,3 & 9		
Technical Reviewer for (group of) methodologies:			
ACM0001, AM0002, AM0003, AM0010, AM0011, AM0012, AMS-III.G	Yes	*AM0021*	Yes
ACM002, AMS-I.A-D, AM0019, AM0026, AM0029	Yes	*AM0023*	Yes
ACM003, ACM0005, AM0033, AM0040	Yes	*AM0024*	Yes
ACM0004	Yes	*AM0027*	Yes
ACM0006, AM0007, AM0015, AM0036, AM0042	Yes	*AM0028, AM0034*	Yes
ACM0007	Yes	*AM0030*	Yes
ACM0008	Yes	*AM0031*	Yes
ACM0009, AM0008, AMS-III.B	Yes	*AM0032*	Yes
AM0006, AM0016, AMS-III.D	Yes	*AM0035*	Yes
AM0009, AM0037	Yes	*AM0038*	Yes
AM0013, AM0022, AM0025, AM00379, AMS-III.H, AMS-III.I	Yes	*AM0041*	Yes
AM0014	Yes	*AM0034*	Yes
AM0017	Yes	*AMS-II.A-F*	Yes
AM0018	Yes	*AMS-III.A*	Yes
AM0020	Yes	*AMS-III.E, AMS-III.F*	Yes

CERTIFICATE OF COMPETENCE

Luis Filipe Aboim Tavares

Qualification in accordance with DNV's Qualification scheme for CDM/JI (ICP-9-8-i1-CDMJI-i1

GHG Auditor:	Yes		
CDM Validator:	Yes	***JI Validator:***	No
CDM Verifier:	Yes	***JI Verifier:***	No
Industry Sector Expert for Sectoral Scope(s):	Sectoral scope		
Technical Reviewer for (group of) methodologies:			
ACM0001, AM0002, AM0003, AM0010, AM0011, AM0012, AMS-III.G	No	*AM0021*	No
ACM002, AMS-I.A-D, AM0019, AM0026, AM0029	No	*AM0023*	No
ACM003, ACM0005, AM0033, AM0040	No	*AM0024*	No
ACM0004	No	*AM0027*	No
ACM0006, AM0007, AM0015, AM0036, AM0042	No	*AM0028, AM0034*	No
ACM0007	No	*AM0030*	No
ACM0008	No	*AM0031*	No
ACM0009, AM0008, AMS-III.B	No	*AM0032*	No
AM0006, AM0016, AMS-III.D	No	*AM0035*	No
AM0009, AM0037	No	*AM0038*	No
AM0013, AM0022, AM0025, AM00379, AMS-III.H, AMS-III.I	No	*AM0041*	No
AM0014	No	*AM0034*	No
AM0017	No	*AMS-II.A-F*	No
AM0018	No	*AMS-III.A*	No
AM0020	No	*AMS-III.E, AMS-III.F*	No

CERTIFICATE OF COMPETENCE

Marco A. Ratton

Qualification in accordance with DNV's Qualification scheme for CDM/JI (ICP-9-8-i1-CDMJI-i1

GHG Auditor:	Yes		
CDM Validator:	No	***JI Validator:***	No
CDM Verifier:	No	***JI Verifier:***	No
Industry Sector Expert for Sectoral Scope(s):	Sectoral scope		
Technical Reviewer for (group of) methodologies:			
ACM0001, AM0002, AM0003, AM0010, AM0011, AM0012, AMS-III.G	No	*AM0021*	No
ACM002, AMS-I.A-D, AM0019, AM0026, AM0029	No	*AM0023*	No
ACM003, ACM0005, AM0033, AM0040	No	*AM0024*	No
ACM0004	No	*AM0027*	No
ACM0006, AM0007, AM0015, AM0036, AM0042	No	*AM0028, AM0034*	No
ACM0007	No	*AM0030*	No
ACM0008	No	*AM0031*	No
ACM0009, AM0008, AMS-III.B	No	*AM0032*	No
AM0006, AM0016, AMS-III.D	No	*AM0035*	No
AM0009, AM0037	No	*AM0038*	No
AM0013, AM0022, AM0025, AM00379, AMS-III.H, AMS-III.I	No	*AM0041*	No
AM0014	No	*AM0034*	No
AM0017	No	*AMS-II.A-F*	No
AM0018	No	*AMS-III.A*	No
AM0020	No	*AMS-III.E, AMS-III.F*	No

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