



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	Brazil MARCA Landfill Gas to Energy Project
Project participants (Name(s))	Marca Ltda (Brasil) EcoSecurities Brasil Ltda (Brazil) EcoSecurities Ltd. (United Kingdom)
Sector in which project activity falls	Waste handling and disposal
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):	
<ul style="list-style-type: none"> <input checked="" type="checkbox"/> The CDM-PDD of the Project activity <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 2004-0632, rev. 03)); <input 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 assist it in achieving sustainable development: <ul style="list-style-type: none"> <input type="checkbox"/> (Attach a list of all Parties involved and attach the approval(in alphabetic order)) <input checked="" type="checkbox"/> Other documents, including any validation protocol used in the validation. <ul style="list-style-type: none"> <input type="checkbox"/> DNV's Validation Report (DNV report 2004-0632, rev. 03), including a validation protocol and a list of person interviewed by DOE validation team during the validation process and including an explanation of how DNV has taken due account of comments on validation requirements received. <input type="checkbox"/> Information on when and how the above validation report is made publicly available. <input type="checkbox"/> Banking information on the payment of the non-reimbursable registration fee. <input 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. 	

Executive Summary and Introduction, including

- **Description of the proposed CDM project activity**
- **Scope of validation process (include all documentation that has been reviewed and name persons that have been interviewed as part of the validation, as applicable)**
- **DOE Validation team (list of all persons involved in the validation, describing functions assumed in the validation)**

The “Brazil MARCA Landfill Gas to Energy Project”, located at Cariacica Municipality, Espírito Santo State, Brazil, involves the capture and burning or flaring of landfill gas emitted from solid municipal waste of the metropolitan area of Vitória and the municipalities of Cariacica, Serra and others.

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 rules and modalities 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:

PDD of the Brazil MARCA Landfill Gas to Energy Project, version February 2004.

PDD of the Brazil MARCA Landfill Gas to Energy Project, version March 2004.

International Emission Trading Association (IETA) & the World Bank's Prototype Carbon Fund (PCF): Validation and Verification Manual.

Approved baseline and monitoring methodology AM0003: Simplified Financial Analysis for Landfill Gas Capture Projects (Version 01, 12 January 2004).

The following persons were interviewed:

Sergio Almenara Ribeiro – Manager, Marca Construtora e Serviços.

Pablo Fernandes – EcoSecurities Brasil Ltda,

Mirela Chiapani Souto – Project Manager, Marca Construtora e Serviços

Breno Castilioni Marchiori - Effluent manager, Marca Construtora e Serviços –

The validation team consist of the following personnel:

Mr. Luis Filipe Aboim Tavares

DNV Rio de Janeiro

Ms. Susanne Haefeli

DNV Oslo

Mr. Michael Lehmann

DNV Oslo

For further details, please refer to the “Introduction” Section of DNV's Validation Report (DNV report 2004-0632, rev. 03).

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 February 2004. The Validation consisted of the following three phases:

- i) a desk review of the project design and the baseline and monitoring methodology (March 2004 to April 2004);
- ii) follow-up interview with Project stakeholders (19 March 2003);
- iii) the resolution of outstanding issues and the issuance of the validation report and opinion (April 2004 – May 2005)

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

On 19 March 2003, DNV performed interviews with EcoSecurities and Marca and carried out a site visit at the Cariacica landfill at Vitória, Espírito Santo state, to confirm selected information and to resolve issues identified in the document review.

In order to ensure transparency, a validation protocol has been customized for the Project, according to the Validation 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 three Corrective Action Requests and four requests for Clarification raised by DNV were resolved through communication 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 2004-0632, rev. 03).

For further details, please refer to the "Methodology" Section of DNV's Validation Report (DNV report 2004-0632, rev. 03) and the IETA/PCF Validation and 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)

The PDD of the Marca Landfill Gas to Energy Project was on 24 May 2004 published on DNV Certification's Climate Change website (www.dnv.com/Certification/ClimateChange) and comments by Parties, stakeholders and NGOs were invited through the CDM website from 24 May 2004 to 23 June 2004. Three comments were received in this period.

The comments received and how DNV has taken due account of the comment received are documented in the "Comments by Parties, stakeholders and NGOs" Section of DNV's Validation Report (DNV report 2004-0632, rev. 03).

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 “Brazil MARCA Landfill Gas to Energy Project” at Cariacica, Espírito Santo State, Brazil (hereafter called “the project”). 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 Marca Ltda of Brazil, EcoSecurities Brasil Ltda of Brazil and EcoSecurities Ltd. of the United Kingdom. The participating Parties Brazil and the United Kingdom meet all relevant participation requirements.

The project proposes to collect and combust or flare landfill gas (LFG) captured at the Marca Landfill. The electricity generated from landfill gas also reduces CO₂ emissions associated with the use of grid electricity. However, emission reductions from displacing electricity from the regional grid will not be claimed by the project.

The project is not expected to have considerable environmental impacts. An Environmental Impact Study as required by Brazilian law has been carried out and the project has received an environmental licence for Capture and Treatment of Landfill Gas by IEMA (Instituto Estadual de Meio Ambiente). However, leachate is not yet treated adequately and IEMA required that a plan for installing the necessary aeration units and biologic filter is presented within April 2005. According to the register of IEMA, such a plan was sent to IEMA on 5 April 2005. The project is thus in compliance with environmental legislation. However, the actual implementation of the leachate treatment system must be verified during the first periodic verification of emission reductions.

The project applies the approved baseline and monitoring methodology AM0003, i.e. “Simplified financial analysis for landfill gas capture projects”. 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 applies an Effectiveness Adjustment Factor (EAF) of 10% instead of the methodologies default value of 20%. The provided justification with regard to the current closing conditions of the landfill sufficiently justifies the selected EAF.

By flaring or combustion of landfill gas (methane), the project results in the reduction of CH₄ emissions that are real, measurable and give long-term benefits to the mitigation of climate change. Given that the project is implemented as designed, the project is likely to achieve the estimated amount of emission reductions.

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

Local stakeholder comments were invited according to the Brazilian DNA Resolution 1. However no comments were received.

In summary, the Brazil MARCA Landfill Gas to Energy Project, as described in the project design document of February 2004, meets all relevant UNFCCC requirements for the CDM and all relevant host country criteria and correctly applies the baseline and monitoring methodologies AM0003. Hence, DNV will request the registration of the “Brazil MARCA Landfill Gas to Energy Project” as

CDM project activity.		
For further details, please refer to the "Validation Findings" Section and Table 1 of the Validation Protocol in Appendix A of DNV's Validation Report (DNV report 2004-0632, rev. 03).		
The DOE declares herewith that in undertaking the validation of this proposed CDM project activity it has no financial interest related to the proposed CDM project activity and that undertaking such a validation does not constitute a conflict of interest which is incompatible with the role of a DOE under the CDM.		
By submitting this validation report, the DOE confirms that all validation requirements are met.	Prior to the submission of this validation report to the CDM Executive Board, DNV will have to receive the written approval of voluntary participation from the DNA of the participating Parties, including confirmation by the DNA of Brazil that the project assists in achieving sustainable development.	
Name of authorized officer signing for the DOE	Michael Lehmann	
Date and signature for the DOE	24 May 2005 <i>Michael Lehmann</i>	
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