



**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	N ₂ O Emission Reduction in Paulínia, SP, Brazil
Project participants (Name(s))	Rhodia Energy Brazil Ltda (Brazil) Rhodia Energy SAS (France) Rhodia Energy GHG SAS (France)
Sector in which project activity falls	Chemical Industry (sectoral scop 4)
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 2005-1031, rev.02)); <input type="checkbox"/> The written approval of voluntary participation from the designated national authority of each Party involved, including confirmation by the host Party hat the project activity assist it in achieving sustainable development: <ul style="list-style-type: none"> ○ (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"> ○ DNV's Validation Report (DNV report 2005-1031, rev.02), including a validation protocol and a list of person interviewed by DNV during the validation process. <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 Border and the secretariat in particular with regard to instructions regarding allocation of CERs at issuance. 	

Executive Summary and Introduction, including

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

The “N₂O Emission Reduction in Paulínia, SP, Brazil” project activity consists of the installation of a facility to thermally decompose nitrous oxide (N₂O) from a adipic acid manufacturing unit located in Paulínia, Brazil, operated by Rhodia Poliamida e Especialidades Ltda. N₂O is generated as a by-product of the nitric acid oxidation stage and is emitted in the waste gas stream. Currently, the waste gas stream from the adipic acid unit goes through a treatment process to recover the nitrogen oxides (NO_x), but N₂O is with the off gases released to atmosphere.

The project is expected to reduce GHG emission by approximately 5.96 million tonnes of CO₂-equivalents (tCO₂e) per year.

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. DNV 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:

Rhodia Poliamida e Especialidades Ltda., Rhodia Energy and Perspectives Climate Change: CDM-PDD - N₂O Emission Reduction in Paulínia, SP, Brazil. Version 2 of 19 July 2005, version 3 of 20 July 2005 and version 4 of 12 October 2005.

Rhodia Poliamida e Especialidades Ltda. (Brazil) and Perspectives Climate Change: Monitoring Plan for the N₂O Emission Reduction Project in Paulínia, Federative Republic of Brazil. 5 July 2005.

Letters sent to local stakeholders

Technical opinion request to State Environment Agency - CETESB

Public Attorney Agreement with respect NO_x control and periodical compliance report

Financial proposal of N₂O destruction unit

ONS energy production datasheet Approved Baseline Methodology AM0021: “Baseline Methodology for decomposition of N₂O from existing adipic acid production plants”. Version 01, 25 February 2005.

Approved Monitoring Methodology AM0021: “Baseline Methodology for decomposition of N₂O from existing adipic acid production plants. Version 01, 25 February 2005.

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

IPCC: IPCC Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories.

The following persons were interviewed:

Sergio Damore Filho – Chief Engineer RHODIA Paulínia

João Luiz Alves da Costa – Process Manager RHODIA Paulínia

Thiago Vieira Alves – Chemical Engineer CETESB

Augusto Melo - CFI

The validation team consisted of the following personnel:

Mr Michael Lehmann DNV Oslo, Norway

Team Leader, GHG auditor

Mr Ramesh Ramachandran DNV Chennai, India

GHG auditor

Mr Luis Filipe Tavares	DNV Rio de Janeiro, Brazil	GHG auditor
Ms Cintia Dias	DNV Rio de Janeiro, Brazil	GHG auditor
Mr K. Chandrashekara	DNV Bangalore, India	Chemical sector expert
For further details, please refer to the "Introduction" and "References" Sections of DNV's Validation Report (DNV Report 2005-1031, rev.02).		
Description of methodology for carrying out validation <ul style="list-style-type: none"> • 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. 		
<p>The validation of the project started in July 2005. The validation consisted of the following three phases:</p> <ul style="list-style-type: none"> i) a desk review of the project design, the baseline and monitoring plan; ii) follow-up interview with project stakeholders; iii) the resolution of outstanding issues and the issuance of the preliminary validation report and opinion. <p>The original and revised versions of the PDD submitted by the project participants were reviewed. Additional background documents related to the project design and the baseline were also consulted.</p> <p>On 22 August 2005, DNV performed interviews with project stakeholders during a site visit at the Rhodia Poliamida e Especialidades Ltda. plant at Paulínia, São Paulo State, to confirm and to resolve issues identified in the document review.</p> <p>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.</p> <p>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 requests for Clarification raised by DNV 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 2005-1031, rev.02).</p> <p>For further details, please refer to the "Methodology" Section of DNV's Validation Report (DNV Report 2005-1031, rev.02) and the IETA/PCF Validation and Verification Manual (www.vvmanual.info)</p>		
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; <ul style="list-style-type: none"> • 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 19 July 2005 has been published on DNV's Climate Change website (<http://www.dnv.com/certification/ClimateChange>). Parties, stakeholders and NGOs were through the UNFCCC CDM website invited to provide comments on the validation requirement during a period of 30 days from 19 July to 18 August 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 "N₂O Emission Reduction in Paulínia, SP, Brazil" at Paulínia; São Paulo State, Brazil (hereafter called "the project"). The validation was performed on the basis of UNFCCC criteria for CDM project activities, 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 rules and modalities and the subsequent decisions by the CDM Executive Board.

The project participants are Rhodia Energy Brazil Ltda of Brazil, Rhodia Energy SAS of France and Rhodia Energy GHG SAS of France. The participating Parties –Brazil as host Party and France as Annex I Party - meet all relevant participation requirements.

The project consists of the installation of a facility to thermally decompose nitrous oxide (N₂O) from an adipic acid production plant located in Paulínia, Brazil.

The project correctly applies the approved baseline and monitoring methodology AM0021 titled "Decomposition of N₂O from existing adipic acid production plants". The determination of the baseline is well elaborated, transparent and sufficiently supported with facts. The selected baseline scenario, i.e. the continued non-utilization and atmospheric release of N₂O emissions, is reasonable for the first 7 years crediting period of 2007-2012. Moreover, an analysis of the economic attractiveness of the project alternative without the revenue from carbon credits demonstrates that the project is not a likely baseline scenario.

By collection and combustion of N₂O captured at the adipic acid production plant, the project results in the reduction of N₂O emissions that are real, measurable and give long-term benefits and that are additional to what would have occurred in the absence of the project.


The GHG emission calculations are documented in a complete and transparent manner. The algorithm and methodologies for accounting GHG emissions are appropriate and emission factors are deemed to be of sufficient accuracy.

Detailed responsibilities and authorities for project management, monitoring and reporting and QA/QC procedures have been developed.

Local stakeholder comments were invited according to the Brazilian DNA Resolution 1. Six comments were received, all supporting the project.

In summary, it is the validation team's opinion that the "N₂O Emission Reduction in Paulínia, SP, Brazil" project, as described in the project design documentation of 12 October 2005, meets all relevant UNFCCC requirements for the CDM and correctly applies the approved baseline and monitoring methodology AM0021. Hence, DNV will request the registration of the "N₂O Emission Reduction in Paulínia, SP, Brazil" project as CDM project activity.

For further details, please refer to the "Validation Findings" Section and Table 1 of the Validation Protocol in Appendix A of DNV's Validation Report (DNV Report 2005-1031, rev.02).

The DOE declares herewith that in undertaking the validation of this proposed CDM project activity it has no financial interest related to the proposed CDM project activity and that undertaking such a validation does not constitute a conflict of interest which is incompatible with the role of a DOE under the CDM.		
By submitting this validation report, the DOE confirms that all validation requirements are met.	Prior to the submission of this validation report to the CDM Executive Board, DNV will have to receive the written approval of the DNA of Brazil and France, 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	12 October 2005 	
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