



**CDM Project Activity Registration  
and Validation Report Form**

*(By submitting this form, designated operational entity confirms that the proposed CDM project activity meets all validation and registration requirements and thereby requests its registration)*

**Section 1: Request for registration**

<b>Name of the designated operational entity (DOE) submitting this form</b>	TÜV SÜD Industrie Service GmbH
<b>Title of the proposed CDM project activity (Section A.2 of the attached CDM-PDD) submitted for registration</b>	METHANE AVOIDANCE BY MUNICIPAL SOLID WASTE PROCESSING IN THE CITY OF CHANDIGARH, INDIA
<b>Project participants (Name(s))</b>	Jaiprakash Associates Ltd. (JAL)
<b>Sector in which project activity falls</b>	Waste handling and disposal (13), Agriculture (15)
<b>Is the proposed project activity a small-scale activity?</b>	<u>Yes</u> / No ( <i>underline as applicable</i> )

**Section 2: Validation report**

<b>List of documents to be attached to this validation report (please check mark):</b>	
<p>X The CDM-PDD of the project activity</p> <p>X 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. This explanation is included in the Validation Report No. 845845 Revision 01;</p> <p>X The written approval of voluntary participation from the designated national authority of each Party involved, including confirmation by the host Party that the project activity assists it in achieving sustainable development;</p> <p>X Other documents, including any validation protocol used in the validation <ul style="list-style-type: none"> <li>o Validation Report (Validation Report No. 845845 Revision 01) including a validation protocol, information reference list and and a list of persons interviewed by DOE validation team during the validation process.</li> </ul> </p> <p>X Information on when and how the above validation report is made publicly available.</p> <p>q Banking information on the payment of the non-reimbursable registration fee</p> <p>X 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 allocations of CERs at issuance</p>	

### 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)**

In the project activity, Jaiprakash Associates Ltd. (JAL) is setting up a Municipal Solid Waste (MSW) processing plant near the city of Chandigarh. The facility entails MSW processing to derive Refuse Derived Fuel (RDF) fluff/pellets, which shall be used in a captive thermal power plant of JAL group at Bagheri in Himachal Pradesh. MSW for processing will be received from various collection centres in Chandigarh city. The estimated quantity of MSW currently available for processing in the RDF plant is 350 tonnes per day (TPD) and is expected to reach up to 500 TPD in coming years.

The MSW processing plant is located in Chandigarh city (Union Territory of Chandigarh) and the captive power plant is located in Bagheri (State of Himachal Pradesh).

Project participant is:

- Jaiprakash Associates Ltd. (JAL)

The project starting date is February 21, 2006. The fixed crediting period of 10 years starts on April 1, 2007.

The validation scope is defined as an independent and objective review of the project design document, the project's baseline study and monitoring plan and other relevant documents. The information in these documents is reviewed against Kyoto Protocol requirements, UNFCCC rules and associated interpretations. TÜV SÜD has, based on the recommendations in the Validation and Verification Manual employed a risk-based approach in the validation, focusing on the identification of significant risks for project implementation and the generation of CERs.

All documentation that has been reviewed and all persons interviewed have as part of the validation are listed in annex 2 of the validation report (Validation Report No. 845845 Revision 01).

Studying the existing documentation belonging to this project, it was obvious that the competence and capability of the validation team has to cover at least the following aspects:

- Ø Knowledge of Kyoto Protocol and the Marrakech Accords
- Ø Environmental and Social Impact Assessment
- Ø Skills in environmental auditing (ISO 14000, EMAS)
- Ø Quality assurance
- Ø Technical aspects of municipal solid waste processing
- Ø Technical aspects of refuse derived fuel and power production plants
- Ø Monitoring concepts
- Ø Political, economical and technical conditions in host country

According to these requirements TÜV SÜD has composed a project team in accordance with the appointment rules of the TÜV certification body "climate and energy":

**Michael Rumberg** is head of the division CDM/JI at TÜV SÜD Industrie Service GmbH. In his position he is responsible for the implementation of validation, verification and certifications processes for greenhouse gas mitigation projects in the context of the Kyoto Protocol. Before entering this company he worked as an expert for renewable energy, forestry, environmental issues, climate change and sustainability within the environmental branch of an insurance company. His competences are covering risk assessments, quality and environmental auditing (EMS auditor), baseline setting, monitoring and verification due to the requirements of the Kyoto Protocol.

**Dr. Ayse Frey** is an energy/waste expert for CDM/JI projects at TÜV SÜD Industrie Service GmbH. After her studies in civil and environmental engineering, she completed a PhD in the field of water and waste policy. She has over 2 years of experience with the CDM and JI flexible mechanisms as well as with management systems. She has received extensive training in the CDM/JI validation and verification processes and has participated in numerous CDM/JI project assessments.

**Joydeb Goswami** is an auditor for quality and environmental management systems (according to ISO 9001 and ISO 14001) and a trainee auditor for CDM/ JI projects at TÜV South Asia, TÜV SÜD Group. He is based in Kolkata. He has received extensive training in the CDM validation process.

The audit team covers the above mentioned requirements as follows:

- Ø Knowledge of Kyoto Protocol and the Marrakech Accords (RUMBERG / FREY)
- Ø Environmental and Social Impact Assessment (ALL)
- Ø Skills in environmental auditing (ALL)
- Ø Quality assurance (ALL)
- Ø Technical aspects of municipal solid waste processing (ALL)
- Ø Technical aspects of refuse derived fuel and power production plants (ALL)
- Ø Monitoring concepts (RUMBERG / FREY)
- Ø Political, economical and technical conditions in host country (GOSWAMI)

In order to have an internal quality control of the project, a team of the following persons has been composed by the certification body "climate and energy":

- Ø Werner Betzenbichler (head of the certification body "climate and energy")

For further details please refer to the "Introduction" section of the validation report (Validation Report No. 845845 Revision 01).

#### **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 consists of the following three phases:

- Desk review
- Follow up interviews
- Resolution of clarification and corrective action requests

The audit team has been provided with a draft PDD in May 2006. Based on this documentation a document review and a fact finding mission in form of an on site audit has taken place. The revised final PDD version, which incorporates the responses to the CARs and CRs indicated in the audit process, was submitted in July 2006. The final PDD and the results from the on site audit serve as the basis for the assessment presented herewith.

In order to ensure transparency, a validation protocol was customised 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 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 completed validation protocol is enclosed in Annex 1 to the validation report.

Findings established during validation can either be seen as a non fulfillment of validation criteria or where a risk to the fulfilment of the project objectives is identified. Such findings are termed Corrective Action request. The term “Clarification request” is used when the validation team has identified a need for further clarification.

The Corrective Action Requests and Clarification Requests raised by TÜV SÜD were resolved during communication between the client and TÜV SÜD. To guarantee the transparency of the validation process, the concerns raised and responses that have been given are summarised in chapter 3 of the validation report and documented in more detail in the validation protocol in annex 1 to the validation report. The validation of the project resulted in five Corrective Action Requests and ten Clarification Requests.

For further details please refer to the “Methodology” section of the validation report (Validation Report No. 845845 Revision 01).

**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)**

A global public stakeholder process on the UNFCCC website has taken place from June 03, 2006 for 30 days. Until the end of the stakeholder process, July 02, 2006, no comment has been 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**

TÜV SÜD has performed a validation of the “Methane Avoidance by Municipal Solid Waste Processing in the City of Chandigarh, India” project. The project is a unilateral CDM project. The only Party involved is India as host country. The validation was performed on the basis of UNFCCC criteria and host country criteria, 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 and subsequent decisions by the CDM Executive Board.

The review of the project design documentation and the subsequent follow-up interviews have


provided TÜV SÜD with sufficient evidence to determine the fulfilment of stated criteria. In our opinion, the project does meet all relevant UNFCCC requirements for the CDM and all relevant host country criteria. The project will hence be recommended by TÜV SÜD for registration with the UNFCCC under the CDM.

By displacing fossil fuel-based electricity with electricity generated from municipal solid waste, the project results in reductions of CO<sub>2</sub> emissions that are real, measurable and give long-term benefits to the mitigation of climate change. An analysis of the barriers demonstrates that the proposed project activity is not a likely baseline scenario. Emission reductions attributable to the project are hence additional to any that would occur in the absence of the project activity. Given that the project is implemented as designed, the project is likely to achieve the estimated amount of emission reductions.

Additionally the assessment team reviewed the estimation of the projected emission reductions. We can confirm that the indicated amount of emission reduction of 403 081 tonnes CO<sub>2</sub>e over a crediting period of ten years, resulting in a calculated annual average of 40 308 tonnes CO<sub>2</sub>e, represents a reasonable estimation using the assumptions given by the project documents.

The validation is based on the information made available to us and the engagement conditions detailed in this report. The validation has been performed using a risk based approach as described above. The only purpose of this report is its use during the registration process as part of the CDM project cycle. Hence, TÜV SÜD can not be held liable by any party for decisions made or not made based on the validation opinion, which will go beyond that purpose.

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.	Michael Rumberg
Name of authorized officer signing for the DOE	
Date and signature for the DOE	 July 06, 2006

**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