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# Validation Report

**Biogas Energia Ambiental S.A.**

**Validation of the Revised Monitoring Plan of  
the registered CDM-Project No 0164**

**Baínderantes Landfill Gas to Energy Project (BLFGE)  
Brazil**

REPORT NO. 1030116-RM

**08 November, 2007**

TÜV SÜD Industrie Service GmbH  
Carbon Management Service  
Westendstr. 199 - 80686 Munich – GERMANY

Report No.	Date of first issue	Revision No.	Date of this revision	Certificate No.
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<b>Subject:</b> Validation of a Revised Monitoring Plan			
<b>Accredited TÜV SÜD Unit:</b> TÜV SÜD Industrie Service GmbH Certification Body "climate and energy" Westendstr. 199 - 80686 Munich Federal Republic of Germany		<b>TÜV SÜD Contract Partner:</b> TÜV SÜD Industrie Service GmbH Carbon Management Service Westendstr. 199 - 80686 Munich Federal Republic of Germany	
<b>Client:</b> Biogas Energia Ambiental S.A Rua Guarapes, 1909 – 4°. Andar – cj 41, Brooklin Sao Paulo Brazil		<b>Project Site(s):</b> Bandeirantes landfill km 24 and km 26 at Bandeirantes highway Sao Paulo Brazil	
<b>Project Title:</b> Bandeirantes Landfill Gas to Energy Project (BLFGE)			
<b>Applied Methodology / Version:</b> ACM0001 ver 2		<b>Scope(s):</b> 13	
<b>Registered PDD Version:</b> Registration Date: 20 Feb 06 Starting Date of Crediting Period: 23 Dec 03 - 22 Dec 10 (Renewable)		<b>Revised Monitoring Plan:</b> Date of issuance: 07 November, 2007	
<b>Assessment Team Leader:</b> Javier Castro		<b>Further Assessment Team Members:</b> Victor Abarca Wilson Tomao	
<b>Summary of the Validation Opinion:</b>			
<input checked="" type="checkbox"/> The review of the revised monitoring plan and the subsequent follow-up interviews have provided TÜV SÜD with sufficient evidence to determine the fulfilment of all stated criteria. In our opinion, the revised monitoring plan meets all relevant UNFCCC requirements for the CDM. Hence TÜV SÜD will recommend the replacement of the monitoring plan of the registered PDD by the submitted revision.			
<input type="checkbox"/> The review of the project design documentation and the subsequent follow-up interviews have not provided TÜV SÜD with sufficient evidence to determine the fulfilment of all stated criteria. Hence TÜV SÜD will not recommend the replacement of the monitoring plan of registered PDD.			



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## 1 INTRODUCTION

### 1.1 Objective

The validation objective is an independent assessment by a Third Party (Designated Operational Entity = DOE) of a proposed revision of a monitoring plan against all defined criteria set for the registration under the Clean Development Mechanism (CDM). Validation is required in the context of proposed revisions of a registered CDM activity and will finally result in a conclusion by the executing DOE whether a revised monitoring plan is valid and should be submitted for replacing the previous version. The ultimate decision on the registration of a proposed revision rests at the CDM Executive Board.

The project activity discussed by this validation report is registered as CDM activity N° 0164 with the project title:

Bandeirantes Landfill Gas to Energy Project (BLFGE)

### 1.2 Scope

The scope of any assessment is defined by the underlying legislation, regulation and guidance given by relevant entities or authorities. The core requirements on revised monitoring plans are given by annex 12 of the report of EB-31 as referred below:

*15. The request for revising monitoring plan is made in cases where:*

- a. the monitoring plan in the registered CDM project activity document is found not to be consistent with the approved monitoring methodology applied to the registered project activity; or*
- b. the proposed revision of the monitoring plan ensures that the level of accuracy or completeness in the monitoring and verification process is not reduced as a result of the revision;*

The validation is not meant to provide any consulting towards the client. However, stated requests for clarifications and/or corrective actions may provide input for improvement of the project design.

## 2 METHODOLOGY

The project assessment aims at being a risk based approach and is based on the methodology developed in the Validation and Verification Manual (for further information see [www.vvmanual.info](http://www.vvmanual.info)), an initiative of Designated and Applicant Entities, which aims to harmonize the approach and quality of all such assessments.

### 2.1 Appointment of the Assessment Team

According to the technical scopes and experiences in the sectoral or national business environment TÜV SÜD has composed a project team in accordance with the appointment rules of the TÜV SÜD certification body “climate and energy”. The composition of an assessment team has to be approved by the Certification Body ensuring that the required skills are covered by the team. The Certification Body TÜV SÜD operates four qualification levels for team members that are assigned by formal appointment rules:

- Assessment Team Leader (ATL)
- Greenhouse Gas Auditor (GHG-A)
- Greenhouse Gas Auditor Trainee (T)
- Experts (E)

It is required that the sectoral scope linked to the methodology has to be covered by the assessment team.

The validation team was consisting of the following experts (the responsible Assessment Team Leader is written in bold letters):

Name	Qualification	Coverage of technical scope	Coverage of sectoral expertise	Host country experience
<b>Javier Castro</b>	<b>ATL</b>	☑	☑	
Victor Abarca	GHG-A	☑	☑	
Wilson Tomao	GHG-A	☑	☑	☑

**Javier Castro** is deputy head of the certification body “Climate and Energy” at TÜV SÜD Industrie Service GmbH. He has an academic background in chemical engineering and energy systems. In his position he participates as assessment team leader the validation, verification and certifications processes for GHG mitigation projects. He has received extensive training in the CDM and JI validation processes, and participated in many validations and verifications of CDM projects.

**Víctor Abarca** is heading the department “Environmental Services” of ccaQualitas in Santiago de Chile, a local company being member of the TÜV SÜD Group. Having an academic education as Constructor Engineer and specialized on waste management is well familiar with the assessment of landfills and gas capture. He has received extensive training in the CDM validation and verification process, is an appointed auditor for CDM projects and participated already in several CDM project assessments all over Latin America.

**Wilson Tomao** is Metallurgical Engineer and international auditor (Quality Management System) since 1996 .He has been an external auditor at the "Carbon Management Service" division of TÜV SÜD Industrie Service GmbH since almost one year. He has been involved in CDM audits (based in the Kyoto Protocol) performed in Brazil including baseline document review, on site audit (Quality System, Environmental Management and Energy cogeneration) and reports. Mr. Tomao worked almost 22 years in the quality area, was responsible by a certification body office in Brazil (TUV Bayern) and he is also a TUV auditor for Quality Systems (ISO 9000, VDA 6.1) and Director of the company Ingwaass Qualidade Contínua specialized in Quality Management System consulting.

## 2.2 Review of Documents

The revised Monitoring Plan submitted by the client and additional background documents related to further monitoring aspects were reviewed as initial step of the validation process. The assessment was correlated to the verification of the fourth monitoring plan

(see <http://cdm.unfccc.int/Projects/DB/DNV-CUK1134130255.56/view.html>)

## 2.3 Follow-up Interviews

In the context of the regular verification TÜV SÜD performed on-site visits and interviews in the period of 30 July, 2007. The present request for revision of the monitoring plan is the result of a request for review presented to this fourth verification.

## 2.4 Internal Quality Control

As final step of a validation the validation report has to undergo and internal quality control procedure by the Certification Body "climate and energy", i.e. each report has to be approved either by the head of the certification body or his deputy. In case one of these two persons is part of the assessment team approval can only be given by the other one.

It rests at the decision of TÜV SÜD's Certification Body whether a revised monitoring plan will be submitted for approval by the EB or not.



### **3 FINDINGS**

The point two of the request for review presented by the Executive Board (EB) states:

*“The amount of LFG to the power house has been measured in accordance with the approved methodology while the monitoring plan states the calculation of the amount of the LFG to the power house. A request for revision of the monitoring plan prior should be submitted to include these changes.”*

In order to comply with this requirement the present request for revision of the monitoring plan is presented.

The revised monitoring plan does comply with the methodology and clearly mentions that the amount of LFG to the power house is monitored and not calculated, therefore the proposed revision of the monitoring plan ensures that the level of accuracy or completeness in the monitoring and verification process is not reduced as a result of the revision.

#### 4 VALIDATION OPINION

TÜV SÜD has performed a validation of the revised Monitoring Plan of CDM Project 0164:  
Bandeirantes Landfill Gas to Energy Project (BLFGE)

The review of the revised monitoring plan and the subsequent follow-up interviews have provided TÜV SÜD with sufficient evidence to determine the fulfilment of all stated criteria. In our opinion, the revised monitoring plan meets all relevant UNFCCC requirements for the CDM. Hence TÜV SÜD recommends the replacement of the monitoring plan of the registered PDD by the submitted revision.

Munich, 08 November, 2007



Certification Body "climate and energy"  
TÜV SÜD Industrie Service GmbH



Assessment Team Leader