

# VALIDATION REPORT

# **Conestoga-Rovers & Associates**

# Canabrava Landfill Gás Project

SGS Climate Change Programme SGS United Kingdom Ltd SGS House 217-221 London Road Camberley Surrey GU15 3EY United Kingdom



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Canabrava Landfill Gas Project	SGS Climate Change Programme
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# Summary

This report summarizes the results of the validation of the project, performed on the basis of UNFCCC criteria. The validation has been performed as a desk review of the project documents presented by Conestoga-Rovers & Associates (CRA) and a site visit to Canabrava landfill, where staff from the company was interviewed. The Validation was performed on the basis of the UNFCCC criteria and host country criteria, as well as criteria given to provide for consistent project operations, monitoring and reporting. Using a risk based approach, the review of the project design documentation and the subsequent follow-up interviews have provided SGS with sufficient evidence to determine the fulfilment of the stated criteria.

The emission reductions from Canabrava landfill will be achieved through flaring the LFG collected.

Total amount of emission reductions for the crediting period is therefore 2,028,669 tCO2.

The SGS will request the registration of the Canabrava landfill gas project as a CDM project activity, once the written approval by the DNA of the participating Parties and the confirmation by the DNA of Brazil that the project assists in achieving sustainable development has been received.

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Work carried out by				
Aurea Nardelli, Fabian Go	onçalves.			
Technical review		+		
Irma Lubrecht			No distribution without permission from the Client or responsible organisational unit	
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# **Abbreviations**

AM Approved Methodology
CAR Corrective Action Request
CER Certified Emission Reduction
DNA Designated National Authority

MP Monitoring Plan

NIR New Information Request PDD Project design Document

SGS Société Générale de Surveillance

EF Emission Factor



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Annex 1: Local assessment Annex 2: Validation Protocol Annex 3: Overview of findings



#### 1. Introduction

# 1.1 Objective

The Conestoga-Rovers & Associates has commissioned SGS to perform the validation of the project: Canabrava Landfill Gas Project with regard to the relevant requirements for CDM project activities. 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 (MP) and the project's compliance with relevant UNFCCC and host country criteria are validated in order to confirm that the project design as documented is sound and reasonable and meets the stated requirements and identified criteria. Validation is seen as necessary to provide assurance to stakeholders of the quality of the project and its intended generation of Certified Emission Reduction (CER). UNFCCC criteria refer to the Kyoto Protocol criteria and the CDM rules and modalities and related decisions by the COP/MOP and the CDM Executive Board.

# 1.2 Scope

The scope of the validation 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. SGS has employed a risk-based approach in the validation, 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 Client. However, stated requests for clarifications and/or corrective actions may provide input for improvement of the project design.

# 1.3 GHG Project Description

The purpose of the project activity is to collect landfill gas (LFG) at Phase A of the Canabrava Landfill and combust the extracted LFG over a ten year period utilizing a high efficiency enclosed flare, thereby reducing greenhouse gas (GHG) emissions and generating tonnes of Certified Emissions Reductions (CER).

The Canabrava Landfill is located 18 kilometers (km) from the centre of the City of Salvador, Bahia, Brazil. The entire site covers an area of 66 hectares (ha) and the waste fill area of the site is approximately 40 hectares in size. The size of Phase A of the landfill is approximately 16.8 hectares. The landfill is bordered by the Mocambo River and the Coroado River to the west and to the south respectively. To the north, the site is bordered by the "Barradão" soccer stadium and the Mocambo River; to the east, the Canabrava landfill is surrounded by the Canabrava suburb, a commercial/residential area.

The Canabrava landfill received non-hazardous solid municipal, industrial, commercial, institutional and some agricultural wastes for over 30 years. The landfill emits carbon dioxide and methane into the atmosphere, with these compounds being generated by the anaerobic decomposition of the waste.

The project will involve the construction of a landfill gas collection system consisting of a grid of horizontal trenches and vertical gas extraction wells, centrifugal blowers and all other supporting mechanical and electrical subsystem necessary to collect the LFG. To combust the LFG collected from the site, an enclosed flare with full process controls and instrumentation will also be constructed and operated. The flare will be capable of providing sufficient temperature and retention time of the extracted landfill gas for complete destruction of hydrocarbons, with retention time of 0.5 seconds at a temperature of 875°C.

The emission reductions from Canabrava landfill will be achieved through flaring the LFG collected.



Total amount of emission reductions for the crediting period is therefore 2,028,669 tCO2

# Baseline Scenario:

The project baseline is the uncontrolled release of the landfill gas into the atmosphere.

#### With-project scenario:

Flaring/destruction of captured gas.

#### Leakage:

No leakage needs to be accounted in this project. However, the methodology ACM0001 requires that quantities of electricity or any other fuels required to operate the landfill gas project, including the pumping equipment for the collection system and energy required to transport heat, should be monitored.

In the project activity, electricity consumption is associated with the blower system used to draw landfill gas to the enclosed drum flare, and the total emission resulting from electricity consumption in the project activity is considered in the total project emissions. Emissions from electricity consumption over the crediting period will be 1,599 tCO2.

#### Environmental and social impacts:

The project is not expected to result in negative environmental and social impacts.

#### 1.4 The names and roles of the validation team members

Name	Role
Aurea Nardelli	Lead assessor
Fabian Gonçalves	Local assessor
Irma Lubrecht	Technical reviewer

# 2. Methodology

#### 2.1 Review of CDM-PDD and additional documentation

The validation is performed primarily as a document review of the publicly available project documents. The assessment is performed by trained assessors using a validation protocol.

A site visit is usually required to verify assumptions in the baseline. Additional information can be required to complete the validation, which may be obtained from public sources or through telephone and face-to-face interviews with key stakeholders (including the project developers and Government and NGO representatives in the host country). These may be undertaken by the local SGS affiliate. The results of this local assessment are summarized in Annex 1 to this report.

# 2.2 Use of the validation protocol

The validation protocol used for the assessment is partly based on the templates of the IETA / World Bank Validation and Verification Manual and partly on the experience of SGS with the validation of CDM projects. It serves the following purposes:

- it organises, details and clarifies the requirements the project is expected to meet; and
- it documents both how a particular requirement has been validated and the result of the validation.

The validation protocol consists of several tables. The different columns in these tables are described



below.

Checklist Question	Means of verification (MoV)	Comment	Draft and/or Final Conclusion
The various requirements are linked to checklist questions the project should meet.	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 (Y), or a Corrective Action Request (CAR) due to noncompliance with the checklist question (See below). New Information Request (NIR) is used when the validation team has identified a need for further clarification.

The completed validation protocol for this project is attached as Annex 2 to this report

#### 2.3 Findings

As an outcome of the validation process, the team can raise different types of findings

In general, where insufficient or inaccurate information is available and clarification or new information is required the Assessor shall raise a **New Information Request (NIR)** specifying what additional information is required.

Where a non-conformance arises the Assessor shall raise a **Corrective Action Request (CAR).** A CAR

is 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 verified.

The validation process may be halted until this information has been made available to the assessors' satisfaction. Failure to address a NIR may result in a CAR. Information or clarifications provided as a result of an NIR may also lead to a CAR.

**Observations** may be raised which are for the benefit of future projects and future verification or validation actors. These have no impact upon the completion of the validation or verification activity.

Corrective Action Requests and New Information Requests are raised in the draft validation protocol and detailed in a separate form (Annex 3). In this form, the Project Developer is given the opportunity to "close" outstanding CARs and respond to NIRs and Observations.



#### 2.4 Internal quality control

Following the completion of the assessment process and a recommendation by the Assessment team, all documentation will be forwarded to a Technical Reviewer. The task of the Technical Reviewer is to check that all procedures have been followed and all conclusions are justified. The Technical Reviewer will either accept or reject the recommendation made by the assessment team.

# 3. Determination Findings

# 3.1 Participation requirements

Canada, United Kingdom and Japan are listed as parties of the project. Canada ratified the Kyoto Protocol on 17<sup>th</sup> December 2002, UK on 31<sup>st</sup> May 2002 and Japan 4<sup>th</sup> June 2002.

The Letter of Approval from Japan was issued on 17 February 2006; the Letter of Approval from Canada was issued on 12 January 2006.

Host Party: Brazil is listed as the host Party. Brazil ratified the Kyoto Protocol on 23<sup>rd</sup> August 2002 (http://unfccc.int/files/essential\_background/kyoto\_protocol/application/pdf/kpstats.pdf).

At time of the validation, no Letter of Approval from the host country had been provided. The Letter of Approval will be signed when the DNA of Brazil has received the validation report.

#### 3.2 Baseline selection and additionality

The methodology applied to the project is the Approved consolidated baseline methodology ACM 0001 - "Consolidated baseline methodology for landfill gas project activities" and "Consolidated monitoring methodology for landfill gas project activities".

ACM 0001 is applicable to landfill gas capture project activities, where the baseline scenario is the partial or total atmospheric release of the gas (as verified in Canabrava landfill, total release) and the project activities include the situation where the captured gas is flared (as mentioned in item (a) of the methodology).

Canabrava project's boundary is the site of the project activity where the gas is captured and destroyed. It is consistent with ACM 0001.

In addition, the methodology defines that project proponents should provide an ex ante estimate of emissions reductions, by projecting the future GHG emissions of the landfill using verifiable methods. The total methane emissions in the absence of the Canabrava project activity were estimated based on the waste tonnage of the landfill using a United States Environmental Protection Agency (USEPA) first-order kinetic model for landfill gas.

The relevant information for the baseline analysis and additionality had been presented and considered in the PDD. The project demonstrated additionality discussing and presenting evidences for each condition required in ACM 0001. The methodology requires the use of the "Tool for the demonstration and assessment of additionality". The five steps were clearly described and demonstrated in the PDD (section B.3).

Step 0 is not applicable because the project is expected to start in January 2007.

In step 1, three scenarios were identified. It was demonstrated that the only reasonable alternative to the project was the continued uncontrolled release of landfill gas to the atmosphere.

In step 2, the destruction of methane via the project activity would not result in income other than that derived through CERs. The project is not financially attractive, only through registration as a CDM project. Verified that the implementation of the project require investment. The financial analysis was provided and analyzed during the validation.



In step 3 was verified that the availability of debt funding or access to international capital markets is restricted for this type of project, the project faces investment barrier. Lacks the necessary technical knowledge to implement the landfill gas project, technical and engineering expertise; the project faces technological barrier.

In step 4 it was verified that LFG recovery is not practiced in Brazil, except in those under CDM. There is not legal requirement for the collection and combustion of landfill gas.

In step 5 the CDM registration will facilitate and allow the implementation of the proposed project activity and ensure it is financial viability.

The project is likely to mitigate GHG emissions by implementing a landfill gas collection system, generating less methane emissions than emitted under the baseline scenario, where the LFG is totally released to atmosphere. There are currently no legislative incentives to implement or improve landfill gas recovery in order to avoid CH4 emissions.

It is important to note that these GHGs emission reductions are additional to the current site conditions and current practices, and would have not occurred in the absence of the project; thus, the project complies with the concept of additionality defined under Kyoto's Clean Development Mechanism.

The validation team concluded that the project will create emission reductions that are real, measurable and additional to what would have occurred in the absence of the project.

# 3.3 Application of Baseline methodology and calculation of emission factors

As described in the PDD, the landfill gas not captured by the landfill gas collection and flaring system cannot be monitored, as this emission is diffused over the landfill. The amount of landfill gas collected and destroyed by combustion can be monitored using a flow meter. Project emissions are thus comprised of the quantity of methane collected and not flared due to flaring inefficiency, and this amount is subtracted from the measured amount of collected methane (expected efficiency is upwards of 99.99%). Electricity and thermal energy emission reductions do not apply to the project Canabrava

No leakage effects need to be accounted under ACM 0001, however the methodology defines that the electricity required for the operation of the project activity should be accounted and monitored. Project proponents will account for CO2 emissions by multiplying the quantity of electricity required with the CO2 emissions intensity of the electricity displaced. In Canabrava project, CO2 emissions resulting from electricity consumption will be accounted and deducted from the total emission reductions.

During the validation assessment, an issue was raised (NIR 10) asking details about the source of data informed in the PDD relate to electricity production in Brasil (that 97% of total energy coming from hydroelectric sector). The reference was included in the revised PDD and the NIR 10 was clarified. In order to provide a conservative value of the emissions associated with electrical consumption by the project activity, it was assumed a conservative electrical distribution for Brazil: hydroelectric power would represent 50%; and diesel-generated power represent 50% of the grid. According to the IPCC and the Operador Nacional do Sistema Elétrico of Brasil (ONS) daily reports, the specific emission factor for hydroelectric power is 0 kg CO<sub>2</sub>/MWh and the specific emission factor for diesel-generated power is 978 kg CO<sub>2</sub>/MWh (ONS). It was calculated an estimate of the grid emission factor as 489 kg CO<sub>2</sub>/MWh. This value was used to estimate the emissions resulting from electricity imported by the project activity.

CAR 11 was raised: The PDD was revised to attend the methodology ACM0001 version 4, 28 July 2006. To correct some information in the monitoring plan (table in section D.2.2.1 and D.3). To correct starting and ending date of crediting period (to correct all tables presented in the PDD). The PDD was revised (new version 5, 28/07/2006). Monitoring plan was revised to attend the version 4

The PDD was revised (new version 5, 28/07/2006). Monitoring plan was revised to attend the version 4 of the methodology. Tables 2, 3, 4, 5, 6, section A.4.4.1 of the PDD was correct to present the starting



date of crediting period on 27 October 2006, and ending crediting period on 26 October 2016. CAR 11 was closed out.

# 3.4 Application of Monitoring methodology and Monitoring Plan

ACM 0001 is applicable to landfill gas capture project activities, where the baseline scenario is the partial or total atmospheric release of the gas and the project activities include situations where the captured gas is flared (the case of Canabrava project).

No monitoring of baseline emissions is required in the Canabrava project case, as the baseline scenario is the total uncontrolled land fill gas releasing to atmosphere. Monitoring methodology is based on the direct measurement of the quantity of LFG captured, collected and destroyed by the LFG management system. As defined in ACM 0001, no leakage needs to be accounted.

The first version of PDD did not provide for the monitoring of all applicable indicators, as defined in the monitoring methodology. Section D.2.2.1 did not consider items 1 and 11. In addition, the methane content of the flare should be analysed to determine the fraction of methane destroyed within the flare. It was not detailed on the monitoring plan. CAR 5 was raised during desk study.

The PDD was revised (version issued on 14<sup>th</sup> November, 2005) and item 1 and 11 were included in section D.2.2.1 and D.3. The Annex 4 was updated to include the monitoring of the methane content in the flare emissions. CAR 5 has been closed out.

During the desk study, it was verified that the monitoring plan did not provide the collection and archiving of relevant data concerning environmental, social and economic impacts. CAR 1 was raised. To close out CAR 1, a revised PDD - Annex 4 - was prepared (version issued on 31<sup>st</sup> October, 2005), including monitoring of sustainable development indicators and environmental impacts: (1) Job creation, (2) Income generation, (3) Odour on neighbours, (4) Subsurface migration of landfill gas, (5) Landfill safety and (6) Technology transfer.

No procedures were identified for emergency preparedness for cases where abnormal or emergencies can cause unintended emissions. CAR 2 was raised.

The project responsible explained that in case of flare downtime for maintenance or other reasons, the landfill gas would not be collected/icombusted, and would be released to the atmosphere. This scenario would be equivalent to the baseline scenario, where the LFG produced at the landfill would undergo uncontrolled release to the atmosphere. Then, in case of unintended emissions, this would not affect the emission reduction, as it will be measured directly. The validation team accepted the justification and CAR 2 has been closed out.

#### 3.5 Project design

The project applies the correct PDD format and no modifications have been made to the format. The following "mistakes" were observed:

- PDD, Section A.3, it was not defined the status (private or public) of entity project participants. CAR 4 was raised. The PDD was updated with the identification of public and private project participants as follows:
  - LIMPURB, City of Salvador, State of Bahia (Public Entity)
  - Conestoga-Rovers & Associates (Private Entity)
  - Natsource Asset Management Corp. (Private Entity)



- PDD, Section C.1.2, there is other information in addition to the lifetime of the project. Operational lifetime is not clearly defined, CAR 9 was raised. The text was revised and informes correctly the lifetime as "10 years and 0 months".

The validation team accepted the revised documentation and the CARs 4 and 9 were closed.

#### 3.6 Environmental Impacts

The environmental impacts of the project activity have not been sufficiently described on the first version of PDD. NIR 6 and NIR 8 were raised asking more details. To clarify these issues, more details about environmental impacts were provided in sections F.1 and F.2 of the updated version of the PDD.

No negative environmental impacts are associated with the project activity and there will be no adverse environmental impact to the Mocambo River or the Coroado River. All condensate generated by the project activity will be collected and sanitary water will be properly collected and treated to comply with local environmental regulations. No liquid streams from the project activity will enter the river system.

Emissions from the enclosed drum flare are expected to be largely carbon dioxide and water vapour with trace amounts of uncombusted methane. The combustion regime of the flare will be carefully monitored to ensure the destruction of methane and other components. Further, noise from the blowers required to induce vacuum on the landfill gas collection well field will be minimal.

Positive environmental impacts due to the project activity are identified. Landfill gas emissions will decrease, reducing greenhouse gas emissions and impacts to localized air pollution. Odour will be diminished at local receptors. Operationally, proper management of the landfill gas will reduce the potential for landfill fires and the associated release of incomplete combustion products. Further, the driving force for subsurface migration of landfill gas and landfill gas components is minimized, protecting adjacent buildings and water bodies such as the Mocambo and Coroado River.

The PDD was revised (version issued on 31<sup>st</sup> October, 2005; section E, pages 26-27) to include the information above. NIR 6 and NIR 8 have been closed out.

With regard to EIA requirements, NIR 7 was raised requesting more information. It was informed during the site visit that the state environmental agency (Centro de Recursos Ambientais) requires an environmental license ("Licença de localização") and an application has been submitted to them. The potential environmental impacts of the project were described on the document submitted to Centro de Recursos Ambientais. The application receipt was verified during the SGS site visit ("Protocolo Formação de processo n° 2005 - 004517/TEC/LL-0039", 11<sup>th</sup> August, 2005, fator gerador: LL - implantação de poços de coleta de gás metano - N.S. da Vitória/Salvador - MedP).

The license has been not issued yet. Environmental Agency representative was interviewed and informed that there is no pending and that the license will be issued soon.

In addition, it was verified the document "Term of Environmental Responsibility", signed by Conestoga-Rovers & Associates representative (on 16 <sup>th</sup> June, 2005). In this document, there is a CRA commitment to be in compliance with environmental legal requirments, to promote the environmental quality and to avoid pollution and negative impacts from Canabrava project. NIR 7 has been closed out.

The validation has confirmed that the project is in line with environmental requirements applicable to this kind of activity.

#### 3.7 Local stakeholder comments



The stakeholder consultation shall follow the DNA requirements: "Resolution n° 1 (2003/09/11) Brazil". During the desk study, it was not clear if specific stakeholders (indicated by Resolution n° 1) had been invited to comment on the Canabrava CDM project. CAR 3 was raised.

To close out this CAR 3, evidences were provided, as copies of the letters sent, comments received and formal receipts from the post office.

The invitation was sent to specific stakeholders, considered representative of the general public. Resolution 1 of the DNA specifies the following stakeholders:

- The municipality mayor house;
- The municipality chamber;
- The local attorneys' office;
- The Brazilian NGO Forum;
- The state environmental agency;
- The municipality's environmental authority;
- Local communities' associations.

It was verified that CRA submitted the letters on 9<sup>th</sup> June, 2005 (by checking the formal records of post office). Letters with praise and congratulations was received from local stakeholders.

In addition to the letters mentioned above, project proponents promoted a meeting with local stakeholders (in Salvador, on 21<sup>st</sup> June, 2005) to present the project to the public as well as to local official authorities. Evidences, as invitations published on local newspapers, attendance sheets, photos and written comments were verified during the site visit. Details were included on the PDD.

There were no objections to the project.

Comment relating to further publicity of the project activity will be addressed, as described in the PDD (section G.3).

#### 4. Comments by Parties, Stakeholders and NGOs

In accordance with sub-paragraphs 40 (b) and (c) of the CDM modalities and procedures, the project design document of a proposed CDM project activity shall be made publicly available and the DOE shall invite comments on the validation requirements from Parties, stakeholders and UNFCCC accredited non-governmental organizations and make them publicly available. This chapter describes this process for this project.

#### 4.1 Description of how and when the PDD was made publicly available

The PDD and the monitoring plan for this project were made available on the SGS website <a href="http://cdm.unfccc.int/Projects/Validation/DB/T46Q9H9LEZKWSMU0N7MP3WVM3JD2BH/view.html">http://cdm.unfccc.int/Projects/Validation/DB/T46Q9H9LEZKWSMU0N7MP3WVM3JD2BH/view.html</a> and were open for comments from 18 Aug 05 – 17 Sep 05. Comments were invited through the UNFCCC CDM homepage

4.2 Compilation of all comments received

Comment number	Date received	Submitter	Comment
1			

No comments received to the DOE during the 30 days commenting period.

#### 4.3 Explanation of how comments have been taken into account

12/15



No comments received.

### 5. Validation opinion

Actions have been taken to close out 11 findings.

SGS has performed a validation of project: Canabrava Landfill Gas. The validation was performed on the basis of the UNFCCC criteria and host country criteria, as well as criteria given to provide consistent project operations, monitoring and reporting.

Using a risk based approach, the validation of the project design documentation and the subsequent follow-up interviews have provided SGS with sufficient evidence to determine the fulfilment of the stated criteria.

By collecting landfill gas (LFG) at the Canabrava Landfill and combust the extracted LFG over a ten year period utilizing a high efficiency enclosed flare, the project results in reducing greenhouse gas emissions that are real, measurable and give long-term benefits to the mitigation of climate change. A review of the investment analysis and barriers presented demonstrates that the proposed project activity was 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. If the project is implemented as designed, the project is likely to achieve the estimated amount of emission reductions. The validation is based on the information made available to SGS and the engagement conditions detailed in the 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 SGS can not be held liable by any party for decisions made or not made based on

6. List of persons interviewed

the validation opinion, which will go beyond that purpose.

	5. List of persons interviewed			
Date	Name	Position	Short description of subject discussed	
October 2005	Guy L. Treadwell	CRA Director	Technical information about the project.	
October 2005	Luciano Fiuza	CRA MANAGER	Documentation and licences.	
October 2005	Francisco Brito	Environmental agency Assessor	Operation license, environmental license, stakeholder meeting.	

#### 7. Document references



Category 1 Documents (documents provided by the Client that relate directly to the GHG components of the project, (i.e. the CDM Project Design Document, confirmation by the host Party on contribution to sustainable development and written approval of voluntary participation from the designated national authority):

- /1/ Project Design Document: Canabrava Landfill Gas Project, versions issued on 26 July 2005; 31 October 2005; 14 November 2005; version 5, 28 July 2006; version 6, 30 October 2006.
- /2/ Approved consolidated baseline methodology ACM0001 "Consolidated baseline methodology for landfill gas project activities" (UNFCCC; version 4, 28 July, 2006).
- /3/ Approved consolidated monitoring methodology ACM0001 "Consolidated monitoring methodology for landfill gas project activities" (UNFCCC; version 4, 28 July, 2006).
- /4/ Tool for the demonstration and assessment of additionality (UNFCCC; version 2, 28 November 2005).

Category 2 Documents (background documents used to check project assumptions and confirm the validity of information given in the Category 1 documents and in validation interviews):

- /5/ Copy of letters sent to stakeholder consultation.
- /6/ Copy of letters/comments received from stakeholders.
- /7/ Documented technical responsibility for the Canabrava project ("ART n° SP0000090405-000007), issued on 25<sup>th</sup> July, 2005.
- /8/ Attendance list of the public meeting with the local stakeholders on 21<sup>st</sup> June, 2005.
- /9/ Questionnaires distributed to participants in the public meeting in Jun 21<sup>st</sup>, 2005.
- /10/ Contract between City of Salvador and Conestoga-Rovers & Associates, issued on 20<sup>th</sup> May, 2005. Concession to CRA explores the Canabrava landfill and implement the project.
- "Requerimento para Licença de Localização" and "Roteiro de caracterização do empreendimento RCE/Licença de localização para indústrias" (13 July, 2005). Application questionaire presented to state environmental agency, with general information about the project and its equipment. Necessary documentation for license requesting.
- "Termo de responsabilidade ambiental" TRA, 16 June, 2005. "Term of Environmental Responsibility", signed by Conestoga-Rovers & Associates representative (on 16 th June, 2005). In this document, there is a CRA commitment to be in compliance with environmental legal requirments, to promote the environemntal quality and to avoid pollution and negative impacts from Canabrava project.
- "Ata da Assembléia geral Extraordinária realizada em 10 de Março de 2005". Infraconsult Engenharia S.A. Document evidencing that CRA Holding Inc, Canada bougth 50% of the company Infraconsult Engenharia S.A. (on 10th March, 2005) and that from that date, the company changed its name for Conestoga-Rovers e Associados Engenharia S.A.

