VALIDATION REPORT

Dan Region Associate of Town (DRAT)

Hiriya Landfill Project

SGS Climate Change Programme
SGS United Kingdom Ltd
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Date of Issue:	**Project Number:**
08/10/2008	CDM.VER0666
Project Title:	
Hiriya Landfill Project	
Organisation:	**Client:**
SGS United Kingdom Limited	Dan Region Associate of Towns (DRAT)

Summary:

Dan Region Association of Town (DRAT hereafter) has commissioned SGS to perform the verification of the project: Hiriya Landfill Project' registered with CDM EB, UNFCCC reference number 147.

Methodology Used: ACM0001

Version and Date: Version 02, valid from 30/09/2005

The scope of this validation of revision in Monitoring plan is an independent and objective review of the project design document 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 report is based on the document reviews (Monitoring plan in registered PDD) and site visit observations.

All the findings will be recommended to the CDM Executive Board with a request of revision in Monitoring Plan of registered PDD.

Subject:			
CDM Validation			
Validation Team:			
Kaviraj Singh – Lead Assessor Aviv Sadikov – Local Assessor			☒ No Distribution (without permission from the Client or responsible organisational unit)
Technical Review:	**Trainee Technical Reviewer:**		
Date: 10/10/2008 Name: Sanjeev Kumar	Name: N/A		☐ Limited Distribution
Authorised Signatory:			
Name: Siddharth Yadav Date: 10/10/2008			☐ Unrestricted Distribution
Revision Number:	**Date:**	**Number of Pages:**	
0	08/10/2008	11	
N/A	*N/A*	*N/A*	
N/A	*N/A*	*N/A*	

Abbreviations

CAR	Corrective Action Request
CDM	Clean Development Mechanism
COP/MOP	Conference of parties serving as the meeting of parties to Kyoto Protocol
DNA	Designated National Authority
DOE	Designated Operational Entity
DR	Document Review
GHG	Green House Gas(es)
MP	Monitoring Plan
NIR	New Information Request
PDD	Project Design Document
PP	Project Proponent
UNFCCC	United Nations Framework Convention on Climate Change

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1. Validation Opinion

Paragraph 57 of the modalities and procedures for the CDM allow project participants to revise monitoring plans in order to improve accuracy and/or completeness of information, subject to the revision being validated by a Designated Operational Entity.

SGS United Kingdom Ltd has been contracted by DRAT to perform such a validation of the revision of monitoring plan according to the procedure detailed in annex 34 to EB 26 meeting report. The purpose of a validation is to have an independent third party assessment of the revision of monitoring plan. In particular, the level of accuracy or completeness in the proposed revision of the monitoring plan, and the conformity with approved monitoring methodology applicable to the project activity.

By applying the proposed revision of monitoring plan, the accuracy of information improves.

Theoretically, there should be no impact on the calculation of the emissions reduction achieved by this project activity because the revision is aiming to address the clarity in the data collection and procedure.

Furthermore, we confirm that:

(a) 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 revisions;

(b) the proposed revision of the monitoring plan is in accordance with the approved monitoring methodology applicable to the project activity

(c) This is the first verification for the said project activity.

Signed on Behalf of the Validation Body by Authorized Signatory

Signature: 

Name: Siddharth Yadav

Date: 10/10/2008

2. Introduction

2.1 Objective

DRAT has commissioned SGS to perform the verification of the project: Hiriya Landfill Project with regard to the relevant requirements for CDM project activities. The purpose of verification 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.

2.2 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.

2.3 GHG Project Description

Hiriya Landfill Project was registered as a CDM project on 06 February 2006 under reference number 0147, using approved methodology ACM0001 version 2 http://cdm.unfccc.int/Projects/DB/DNV-CUK1133526421.81/view . This is the first pre-verification of the project activity wherein project developer is requesting for revision in monitoring plan.

2.4 The Names and Roles of the Validation Team Members

Name	Role	Affiliate
Kaviraj Singh	Lead Assessor	SGS India
Avi Sadikov	Local Assessor	SGS Israel

3. Methodology

3.1 Review of CDM-PDD and Additional Documentation

As per UNFCCC web site (http://cdm.unfccc.int/Projects/DB/DNV-CUK1133526421.81/view) the project was registered as a CDM project on 06 February 2006 under reference number 0147.

3.2 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	Ref ID	Means of Verification (MoV)	Comment	Draft and/or Final Conclusion
The various requirements are linked to checklist questions the project should meet.	Lists any references and sources used in the validation process. Full details are provided in the table at the bottom of the checklist.	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 non-compliance with the checklist question (See below). New Information Request (NIR) is used when the validation team has identified a need for further clarification.

3.3 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.

3.4 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.

4. Validation Findings

4.1 Participation Requirements

As per http://cdm.unfccc.int/Projects/DB/DNV-CUK1133526421.81/view. No changes are requested.

4.2 Project Design

As per http://cdm.unfccc.int/UserManagement/FileStorage/LI0WNUXJPGSNZS7NDI4BWOW30CXIT0. No changes are requested.

4.3 Eligibility as a Small Scale Project

Not applicable

4.4 Baseline Selection and Additionality

As per http://cdm.unfccc.int/UserManagement/FileStorage/LI0WNUXJPGSNZS7NDI4BWOW30CXIT0. No changes are requested.

4.5 Application of Baseline Methodology and Calculation of Emission Factors

As per http://cdm.unfccc.int/UserManagement/FileStorage/XCS1GQM7B8LDIGPDHEF9C8Z1ID3B56. No changes requested.

4.6 Application of Monitoring Methodology and Monitoring Plan

SGS has performed a validation of the revision in monitoring plan for registered project "Hiriya Landfill Project'' UNFCCC reference number 0147. The validation was performed on the basis of the UNFCCC criterion which is detailed in Annex 34 to EB 26 meeting report.

The registered PDD requires landfill gas quantity to be measured in m^3, and then normalized to Nm^3 using weekly temperature and pressure readings. This is done in order to normalize the quantity of gas to a standard density – a function of temperature and pressure – in order to calculate the exact quantity of methane destroyed. In order to ensure accurate data, the project developer installed mass flow meters that continuously normalize the landfill gas quantity to Nm^3 in real time, using continuous temperature and pressure measurements. However, the project developer has continued to measure landfill gas temperature and pressure, as it is required to do so by the registered PDD but the emission reduction calculation is based on the Nm^3 readings. While using mass flow meters that continuously convert landfill gas quantity to Nm^3 is far more accurate, it requires the revision in monitoring plan which was presented in the registered PDD. It should be noted, that the EB has also revised subsequent versions of ACM0001 to reflect that temperature and pressure need not be measured if the mass flow meters automatically convert to Nm^3.

It is far more accurate to measure landfill gas quantity using mass flow meters that automatically convert to Nm^3 using continuous temperature and pressure data. Rather than to measure landfill gas quantity in m^3 and then to convert to Nm^3 using weekly temperature and pressure readings as required by the registered PDD. This deviation therefore yields data that is far more accurate, and it follows that the emission reductions calculated on the basis of this data are far more accurate as well. Therefore there is no need to monitor pressure and temperature separately and hence taken out in the revised monitoring plan.

The above said changes in the revised monitoring plan will bring more clarity and will not effect the emission reduction calculation. Rest of the monitoring parameters in the original monitoring plan remains unchanged and this revision improves the accuracy of monitoring plan

4.7 Choice of the Crediting Period

As per http://cdm.unfccc.int/UserManagement/FileStorage/LI0WNUXJPGSNZS7NDI4BWOW30CXIT0. No changes requested.

4.8 Environmental Impacts

As per http://cdm.unfccc.int/UserManagement/FileStorage/LI0WNUXJPGSNZS7NDI4BWOW30CXIT0. No changes requested

4.9 Local Stakeholder Comments

As per http://cdm.unfccc.int/UserManagement/FileStorage/LI0WNUXJPGSNZS7NDI4BWOW30CXIT0. No changes requested.

5. 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.

5.1 Description of How and When the PDD was Made Publicly Available

As per http://cdm.unfccc.int/UserManagement/FileStorage/XCS1GQM7B8LDIGPDHEF9C8Z1ID3B56. No changes requested.

5.2 Compilation of all Comments Received

As per http://cdm.unfccc.int/UserManagement/FileStorage/XCS1GQM7B8LDIGPDHEF9C8Z1ID3B56. No changes requested.

5.3 Explanation of How Comments Have Been Taken into Account

As per http://cdm.unfccc.int/UserManagement/FileStorage/XCS1GQM7B8LDIGPDHEF9C8Z1ID3B56. No changes requested.

6. Document References

/1/ ACM0001 version 02
/2/ Registered PDD
/3/ Revised Monitoring Plan version 01 dated 06th Oct 2008

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