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# VALIDATION OPINION FOR REVISION OF REGISTERED MONITRONG PLAN

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**L H Sugar Factories Ltd**

**LHSF Bagasse Project**

**UNFCCC Ref Number:0334**

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**SGS Climate Change Programme**

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Date of issue:	Project No.:
30-05-2007	CDMVer0101
Organization	SGS United Kingdom
Subject:	
Validation of registered CDM monitoring plan	<b>Indexing terms</b>
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## 1. Introduction

### 1.1 Objective

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.

The LH Sugar Factories Ltd. has commissioned SGS 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 original monitoring plan is part of the PDD of registered CDM project: LHSF Bagasse Project, UNFCCC reference number 0334. The purpose of a validation is to have an independent third party assess 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 the approved monitoring methodology applicable to the project activity.

### 1.2 Scope

The scope of the validation is defined as an independent and objective review of the revision of monitoring plan to be included in the registered project design document, 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

LHSF Bagasse Project was registered on 5 May 2006, UNFCCC Ref number 0334, the crediting period is from 30 Dec 2005 to 29 Dec 2015 (Fixed), the first verification was already completed and the CER were issued. The deviation was sought for the first monitoring period.

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

<b>Name</b>	<b>Role</b>
<i>Pankaj Mohan</i>	<i>Local Assessor</i>
<i>Sanjeev Kumar</i>	<i>Assessor</i>
<i>Shivananda Shetty</i>	<i>Lead Assessor</i>

## 2. Methodology

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

The validation is performed primarily as a document review of the proposed revision of monitoring plan, registered PDD and relevant publicly available project documents. The assessment is performed by trained assessors.

### 2.2 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 to his report if applicable. In this form, the Project Developer is given the opportunity to "close" outstanding CARs and respond to NIRs and Observations.

### **2.3 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**

Ref. TUV SUD Report No: 739242, rev. 02, dated 17<sup>th</sup> March 2006 and registered PDD Project 0334 : LHSF Bagasse Project

Participation requirement is not applicable to this revision of monitoring plan.

### **3.2 Baseline selection and additionality**

Ref. TUV SUD Report No: 739242, rev. 02, dated 17<sup>th</sup> March 2006 and registered PDD Project 0334 : LHSF Bagasse Project

Baseline remains unchanged. Additionality is not affected by the proposed revision of monitoring plan.

### **3.3 Application of Baseline methodology and calculation of emission factors**

Ref. TUV SUD Report No: 739242, rev. 02, dated 17<sup>th</sup> March 2006 and registered PDD Project 0334 : LHSF Bagasse Project

Application of baseline methodology and calculation of emission factors are not affected by the

proposed revision of monitoring plan.

### 3.4 Description of Revision of Registered Monitoring Plan

During the first verification it was verified that few parameters mentioned in the registered PDD was not playing any role in calculations of emission reduction. The boiler is not co-fired even the provision is not in the equipment to firing the fossil fuel. This was also certified by the Supplier of the equipment and was provided to the EB during the deviation sought for the first verification period. Hence the monitoring of biomass is not required as per the applicable methodology AMS.I.D version 07.

As per the methodology, monitoring shall consist of metering the electricity generated by the renewable technology and in the case of co-fired plants, the amount of biomass and fossil fuel input shall be monitored. The registered project activity is not a co-fired plant and even does not have the provision for the same. Hence as per requirement of the methodology, net electricity supplied to the grid is being monitoring. The grid emission factor was calculated ex-ante and fixed for the first crediting period.

Although this is not the requirement of the methodology, the project will monitor the bagasse generated in the plant as per their regulatory requirement for the sugar industry and the data is verifiable. The bagasse is the by-product of sugar manufacturing process and in house generated in the sugar factory. The plant exports power during the season only and not operates in OFF season because the turbine used is a back pressure turbine which can operate only during sugar cane season as the steam can not be utilized in the process during off season. The factory does not purchase any biomass from outside which was verified during the first monitoring period. The factory sold the saved Bagasse of the season and keeps only some amount for the start up only in the next season.

During the crushing season the Bagasse generated by the sugar mill was only consumed and this can be verified by the RT8C forms which are submitted by each and every sugar factory to Government of India. RT8C form gives the amount of Bagasse produced in percentage of Cane crushed. The amount of Bagasse generation can only be estimated rather than measured. This estimation is on conservative side.

#### 3.4.1 Emission reductions

In line with the PDD for the project activity the total number of CERs (tCO<sub>2</sub>e) is calculated from the following equations:

$$ER_y = BE_y - Pe_y \quad \text{Equation 1}$$

Where:

ER<sub>y</sub> = Emission reduction in year y, tCO<sub>2</sub>e

BE<sub>y</sub> = Baseline emissions in year y, tCO<sub>2</sub>e

Pe<sub>y</sub> = Project emissions in year y, tCO<sub>2</sub>e

$$BE_y = 0.918.P_y \quad \text{Equation 2}$$

Where:

P<sub>y</sub> = Electricity exported in year y, MWh

### 3.4.2 Monitored data

#### Monitored energy data

The following data has been monitored for the project. Electricity export data has been taken from the invoices raised by the factory on UPPCL, the purchaser of electricity.  $P_y$  has been monitored as exports of electricity to the grid.

Period	Net electricity export, (kWh)	Invoice no
Month 1		
Month 2		
Month 3		
Month 4		
Month 5		
Total		

#### 3.4.2.1.1.1 Biomass generation

The power plant operated solely on bagasse. The Bagasse generation according to RT8C form is shown in the table below.

Period	Bagasse Generation, mt	RT 8C form mentioning in % of Cane crushed
Month 1		
Month 2		
Month 3		
Month 4		
Month 5		
Total		

#### 3.4.2.1.1.2 Environmental monitoring

The plant operated under a valid consent from the Uttar Pradesh Pollution Control Board and a copy of this consent will be provided to the verifiers.

### 3.4.3 Calculation of emission reductions

The calculation of the emission reductions requires the input of the net electricity export variable into equation 2.

$$BE_y = 0.918.P_y$$

Equation 2

Where:

$P_y$  is in MWh

Therefore BE<sub>y</sub> = 0.918 \* P<sub>y</sub> ( tCO<sub>2e</sub> )

The calculation of the emission reductions from the project requires to consider the project emissions but as the project emission is equal to zero the emission reductions is equal to the baseline emissions.

$$ER_y = BE_y - Pe_y$$

Equation 1

P<sub>ey</sub> = 0 (There is no fossil fuel consumption)

Therefore ER<sub>y</sub> = BE<sub>y</sub> tCO<sub>2e</sub>

### 3.5 Project design

Ref. TUV SUD Report No: 739242, rev. 02, dated 17<sup>th</sup> March 2006 and registered PDD Project 0334 : LHSF Bagasse Project

Project design is not affected by this revision of monitoring plan.

### 3.6 Environmental Impacts

Ref. TUV SUD Report No: 739242, rev. 02, dated 17<sup>th</sup> March 2006 and registered PDD Project 0334 : LHSF Bagasse Project

Not applicable to the revision of monitoring plan.

### 3.7 Local stakeholder comments

Ref. TUV SUD Report No: 739242, rev. 02, dated 17<sup>th</sup> March 2006 and registered PDD Project 0334 : LHSF Bagasse Project

Not applicable to the revision of monitoring plan.

## 4. Validation opinion

SGS has performed a validation of the revision of monitoring plan for registered project: "LHSF Bagasse Project, UNFCCC reference number 0334". The validation was performed on the basis of the UNFCCC criteria which are detailed in annex 34 to EB 26 meeting report.

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

Theoretically, there should be no impact on the estimation of the emissions reduction achieved by LHSF Bagasse Project, because the revision is aiming to address the amount of electricity exported, Bagasse generation and UPPCB consent. Emission factor in the registered PDD remains unchanged.

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 AMS.I.D version 07 which was applicable to this project activity

(c) All the parameters mentioned in the proposed revised monitoring plan do take into account the findings of the first monitoring period for which the deviation was sought



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 approval process detailed in annex 34 to EB 26 meeting report. Hence SGS 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 proposing the revised monitoring plan and providing the validation opinion for this CDM project activity it has no financial interest related to the registered 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.

SGS United Kingdom Limited, (05/06/2007)  
Siddharth Yadav

SGS India Pvt. Ltd., (05-06-2007)  
Shivananda Shetty

## 5. Document references

Category 1 Documents (documents provided by the Client that relate directly to the revision of monitoring plan):

- /1/ Revised Monitoring Plan: LHSF Bagasse Project
- /2/ EB reply to the deviation

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):

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