VALIDATION OPINION FOR REVISION OF REGISTERED MONITRONG PLAN

Changshu Haike Chemical Co. Ltd.

Changshu Haike HFC23 Decomposition Project

UNFCCC Reference Number: 1105

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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.

Changshu Haike Chemical Co. Ltd has commissioned SGS to perform such a validation of the revision of monitoring plan according to the procedure detailed in Annex34 to EB26 meeting report. The original monitoring plan is part of the PDD of the registered CDM project: Changshu Haike HFC 23 Decomposition Project, UNFCCC reference number 1105. The purpose of this validation is to have an independent third party assessment to 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 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

Changshu Haike HFC23 Decomposition Project was registered on 15/02/2008, UNFCCC Ref number 1105, and the first crediting period is from 01/05/2008 to 30/04/2015.

1.4 The names and roles of the validation team members

Name	***Role***
Qi Yang	*Team Leader*
Linda Hu Mudan	*Lead Assessor Trainee*

2. Methodology

2.1 Review of documentation

The validation is performed primarily as a document review of the proposed revision of monitoring plan, registered PDD, approved methodology and relevant EB guidance and meeting reports. 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

The modifications to the registered monitoring plan are as follows:

3.1 Calibration of GC, electricity meter, steam meter and natural gas meter

The original description on calibration of above monitoring instruments did not comply with the approved methodology AM0001Version05, the revised monitoring plan is now respecting the methodology on the monthly recalibration of GC, electricity meter, steam meter and natural gas meter, which also reflects the calibration frequency in real implementation of the project activity.

3.2 Monitoring equipment of Q_HCFC22y

In the registered monitoring plan, Q_HCFC22y was described to be measured by weight meter which is ambiguous. Hence, PP further confirmed that Q_HCFC22y is measured by mass flow meter in the revised monitoring plan, which is the actual practice in the project. And the calibration of the mass flow meter will be conducted monthly according to approved methodology AM0001Version05.

3.3 CO2 emission factor for steam (E_Steamy)

In the registered monitoring plan, E_Steamy was calculated based on National Electricity Power Industries Statistics Data and IPCC default value which was inconsistent with the actual practice of the project. In section B.7.1 of the revised monitoring plan, E_Steamy is revised to be based on steam supplier data and IPCC default values which are in line with the AM0001 Version05.

3.4 Number of flow meters measuring q_HFC23y

In the original monitoring plan, **three** flow meters will be installed and two of them (working flow meter) are used for normal measurement, this original installation plan can not better guarantee the compliance of AM0001, wherein two flow meters measure the same amount of HFC 23 flows

simultaneously is required, and these two flow meters have to be calibrated at certain interval. This is modified in the revised monitoring plan that **four** mass flow meters being divided into 2 series and each series has 2 flow meters will be installed and one series (working flow meters) is used for normal measurement and the other series as backup. This practice is in line with the AM0001 Version05.

3.5 Checking the cut-off condition

In the registered monitoring plan, checking the cut-off condition was to be conducted every interval during verification (annually or every 6 months usually) which was not appropriate. The revised monitoring plan states that it is checked for every monitoring period for the continuous HFC23 flow from the existing HCFC22 facility and it is to be assessed on an *ex-post* basis, which is in accordance with the AM0001 Version05.

3.6 Non-decomposed HFC23 in the incinerator (ND_HFC23)

In Annex4 of the registered monitoring plan, the description of ND_HFC23y was complicated and not understandable. The revised monitoring plan states that the ND_HFC23 is derived from HFC23 concentration in the stack gas analyzed by GC at ppm level, based on the total volume (m^3) of the stack gas, the weight then can be calculated. This practice is in line with AM0001 Ver05.

3.7 The uncertainty of the meters for q_HFC23y

In the registered monitoring plan, the uncertainty of the mass flow meter for q_HFC23 is **±0.5%** which is inconsistent with the specification of the meter. It is corrected to be **±0.35%** in the revised monitoring plan as indicated in the specification supplied by the meter supplier E+H (Reference /6/).

3.8 The unit of Q_FFy

The unit of Q_FFy was corrected to be 'm^3/h' in the revised monitoring plan as per the specification of the vortex flow meter, which is in compliance with the AM0001 Version05.

4. Validation opinion

SGS has performed a validation of the revision of monitoring plan for registered project 'Changshu Haike HFC23 Decomposition Project, UNFCCC reference number 1105'. The validation was performed following the UNFCCC criteria and in accordance with Annex34 of EB26 meeting report.

The proposed revision of monitoring plan corrects some noncompliances in the registered PDD to AM0001 Version05 and reflects some correct practices in real implementation to replace assumptions which were vague or inconsistent in the registered PDD, hence, this revision improves accuracy and completeness of information, and there is no influence on the actual monitoring practice/results.

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 revision;
(b) the proposed revision of the monitoring plan is in accordance with the approved monitoring methodology applicable to the project activity;
(c) no findings regarding the content of this revision were raised in previous verification reports.

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 Annex34 to EB26 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.

SGS China, 10/06/2008
Qi Yang
Lead Assessor

SGS United Kingdom Limited,16/06/2008
Siddharth Yadav
Technical Manager

5. Document references

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

/1/ Revised Monitoring Plan (track change version): Section B.7 and Annex4 of PDD

/2/ Revised Monitoring Plan (clean version): Section B.7 and Annex4 of PDD

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):

/3/ AM0001 Version05

/4/ Annex34 to EB26 meeting report

/5/ Registered PDD: Changshu Haike HFC 23 Decomposition Project (UN Ref 1105)

/6/ Specification of the HFC23 mass flow meter supplier by E+H

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