
VALIDATION OPINION FOR REVISION OF REGISTERED MONITORING PLAN

Indian Seamless Metal Tube Limited

**Energy Efficiency Improvement in
Electric Arc Furnace at Indian
Seamless Metal Tube Limited
(ISMT), Jejuri, Maharashtra**

UNFCCC Ref. No. 0777

SGS Climate Change Programme

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

Date of Issue:		Project Number:	
31-12-2008		CDM.VER0664	
Project Title:			
Energy Efficiency Improvement in Electric Arc Furnace at Indian Seamless Metal Tube Limited (ISMT), Jejuri, Maharashtra			
Organisation:		Client:	
SGS United Kingdom Limited		Indian Seamless Metal Tube Limited (ISMT)	
Subject:			
Validation opinion for revision of Registered Monitoring Plan			
Validation Team:			
Vikrant Badve – Lead Assessor Ramkrishna Patil - Assessor		☒ No Distribution (without permission from the Client or responsible organisational unit)	
Technical Review:	Trainee Technical Reviewer:		
Date: 23-07-2008, 08-01-2009 Name: Sanjeev Kumar	Kaviraj Singh		
Authorised Signatory:		☐ Limited Distribution	
 Name: Siddharth Yadav Date: 30-01-2009		☐ Unrestricted Distribution	
Revision Number:	Date:	Number of Pages:	
0	22-07-2008	11	
1	31-12-2008	11	
--	--	--	

Table of Content

1. Validation Opinion	4
2. Introduction	5
2.1 Objective.....	5
2.2 Scope.....	5
2.3 GHG Project Description	5
2.4 The Names and Roles of the Validation Team Members	5
3. Methodology	6
3.1 Review of CDM-PDD and Additional Documentation	6
3.2 Use of the Validation Protocol	6
3.3 Findings	6
3.4 Internal Quality Control	7
4. Validation Findings.....	8
4.1 Participation Requirements	8
4.2 Project Design	8
4.3 Eligibility as a Small Scale Project.....	8
4.4 Baseline Selection and Additionality	8
4.5 Application of Baseline Methodology and Calculation of Emission Factors	8
4.6 Application of Monitoring Methodology and Monitoring Plan	8
4.7 Choice of the Crediting Period	9
4.8 Environmental Impacts	9
4.9 Local Stakeholder Comments	9
5. List of Persons Interviewed.....	10
6. Document References	11

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 Indian Seamless Metal Tube Limited (ISMT) 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: Energy Efficiency Improvement in Electric Arc Furnace at Indian Seamless Metal Tube Limited (ISMT), Jejuri, Maharashtra; UNFCCC ref. no. 0777. 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 auxiliary consumption of electric arc furnace is not directly measured as mentioned in registered PDD monitoring plan but same was calculated as the difference between measured value of electricity consumption by the entire plant and electricity consumption by various other units at the project site i.e. Electric arc furnace, Laddle furnace, Boggy Furnace, Rolling Mill and INOX oxygen plant. The formula for calculation of auxiliary power consumption was mentioned in the revised monitoring plan which was inline with the monitoring practice adopted by the project proponent. Project proponent was calculating the auxiliary consumption since attempt to install the separate electricity meter for electric arc furnace auxiliaries was not successful. The electricity consumption of various units used for auxiliary consumption calculation is monitored monthly and included under monitoring plan for the project activity. The other monitoring parameters in the original monitoring plan remain unchanged. This revision improves the accuracy of information.

Theoretically, there should be no impact on the calculation of the emissions reduction achieved by this project activity because the revision is aiming to calculate the auxiliary electricity consumption of electric arc furnace using measured value of the electricity consumption by various other units in the factory and the electricity meters used to record the electricity consumption are calibrated as per the QA/QC procedure applicable for project activity.

This revision improves the accuracy of information provided and consistency in registered PDD and the monitoring plan.

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) the project activity has yet to undergo first periodic verification.

Signed on Behalf of the Validation Body by Authorized Signatory

Signature:



Name: Siddharth Yadav

Date: 30-01-2009

2. Introduction

2.1 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.

SGS United Kingdom Ltd has been contracted by Indian Seamless Metal Tube Limited (ISMT) 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: Energy Efficiency Improvement in Electric Arc Furnace at Indian Seamless Metal Tube Limited (ISMT), Jejuri, Maharashtra.; UNFCCC ref. no. 0777. 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 the approved monitoring methodology applicable to the project activity.

The Validation was performed in accordance with the UNFCCC criteria for the Clean Development Mechanism (CDM) and host country criteria, as well as criteria given to provide for consistent project operations, monitoring and reporting.

SGS reviewed of the project design documentation, using a risk based approach and conducted follow-up interviews.

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

As per <http://cdm.unfccc.int/Projects/DB/SGS-UKL1163771000.02/view> web page there is no change in the project activity description. The project was registered on 25th December 2006 with reference number 0777.

2.4 The Names and Roles of the Validation Team Members

Name	Role	Affiliate
Vikrant Badve	Lead Assessor	SGS India
Ramkrishna Patil	Assessor	SGS India

3. Methodology

3.1 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.

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:

- mistakes have been made with a direct influence on project results;
- validation protocol requirements have not been met; or
- 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. In this form, the Project Developer is given the opportunity to “close” outstanding CARs and respond to NIRs and Observations.

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/UserManagement/FileStorage/E59WJRXAG9LYVVRROPLQ40H2Q25800> Validation Report (CDM.Val0650 dated 14/11/2006 revision 03) available on UNFCCC webpage <http://cdm.unfccc.int/Projects/DB/SGS-UKL1163771000.02/view> No Change.

4.2 Project Design

As per <http://cdm.unfccc.int/UserManagement/FileStorage/E59WJRXAG9LYVVRROPLQ40H2Q25800> Validation Report (CDM.Val0650 dated 14/11/2006 revision 03) available on UNFCCC webpage <http://cdm.unfccc.int/Projects/DB/SGS-UKL1163771000.02/view> No Change.

4.3 Eligibility as a Small Scale Project

As per <http://cdm.unfccc.int/UserManagement/FileStorage/E59WJRXAG9LYVVRROPLQ40H2Q25800> Validation Report (CDM.Val0650 dated 14/11/2006 revision 03) available on UNFCCC webpage <http://cdm.unfccc.int/Projects/DB/SGS-UKL1163771000.02/view> No Change.

4.4 Baseline Selection and Additionality

As per <http://cdm.unfccc.int/UserManagement/FileStorage/E59WJRXAG9LYVVRROPLQ40H2Q25800> Validation Report (CDM.Val0650 dated 14/11/2006 revision 03) available on UNFCCC webpage <http://cdm.unfccc.int/Projects/DB/SGS-UKL1163771000.02/view> No Change.

4.5 Application of Baseline Methodology and Calculation of Emission Factors

As per <http://cdm.unfccc.int/UserManagement/FileStorage/E59WJRXAG9LYVVRROPLQ40H2Q25800> Validation Report (CDM.Val0650 dated 14/11/2006 revision 03) available on UNFCCC webpage <http://cdm.unfccc.int/Projects/DB/SGS-UKL1163771000.02/view> No Change.

4.6 Application of Monitoring Methodology and Monitoring Plan

The project activity registered with CDM – EB and uses AMS II D, version 07 as monitoring methodology. The monitoring plan of the registered PP should be revised because the registered PDD (monitoring plan) mentioned that auxiliary power consumption of electric arc furnace will be monitored during the entire crediting period. In the project activity it looks technically problematic to measure the auxiliary power consumption of electric arc furnace. Auxiliary power consumption of electric arc furnace is the power consumed by the supporting equipments which are fed by various LT supplies available in the plant. These supporting equipments are also used for other machines installed in the plant in addition to the Electric Arc Furnace. Because of this, power exclusively used for the Electric Arc Furnace auxiliary can not be measured through a separate meter and will have to be a arrived/ calculated figure only. Thus in absence of directly monitored values the auxiliary power consumption of electric furnace will be calculated. The difference between measured value of electricity consumption of the entire plant and electricity consumption by various other units at the project site viz. Electric arc furnace (EAF), Laddle furnace (LF), Boggy Furnace (BHF), Rolling Mill and INOX oxygen plant. Therefore, the monitored values of power consumption by different units (all other than electric arc furnace) will be subtracted from the total consumption at the site and the arrived values will be considered the auxiliary power consumption by electric furnace. The formula used for the

auxiliary consumption of electric arc furnace was checked during the site visit and same was found inline with the monitoring practice adopted by the project proponent.

The revised monitoring plan mentions that auxiliary consumption of electric arc furnace is calculated and also added following new parameters in the monitoring plan; (1) Power consumption by the total plant, (2) Power consumption at O₂ INOX plant, (3) Power consumption in Boggy furnace and (4) Power consumption in rolling mill. The power consumption of electric arc furnace (earlier measured now calculated) and power consumption in ladle furnace are already part of the registered monitoring plan. The electricity meters at these locations were covered under the QA/QC policy applicable for the project activity which ensures reliability. Also these meters are tested and calibrated as per the applicable policy every year which ensures accuracy of the measurement. After cross checking the formula for auxiliary consumption calculation and calibration certificates for each electricity meter involved therein audit team found that calculated value of auxiliary consumption can be accepted. It is further noted that it was inadvertently mentioned on page 11 of registered PDD that the auxiliary power consumption of electric arc furnace was continuously measured, during validation however, it was calculated using directly measured parameters. The revised monitoring plan submitted along with this report is inline with the same.

The revised monitoring plan was submitted along with this validation opinion mentions this change.

Rest of the monitoring plan remains the same as mentioned in the registered PDD available at UNFCCC website <http://cdm.unfccc.int/Projects/DB/SGS-UKL1163771000.02/view> and revised monitoring plan is attached with the revised validation opinion.

There is no other change in the validation report (CDM.Val0650 dated 2006-11-14; revision 03) available on UNFCCC website <http://cdm.unfccc.int/UserManagement/FileStorage/E59WJRXAG9LYVVRROPLQ40H2Q2580O>.

4.7 Choice of the Crediting Period

As per <http://cdm.unfccc.int/UserManagement/FileStorage/E59WJRXAG9LYVVRROPLQ40H2Q2580O> Validation Report (CDM.Val0650 dated 2006-11-14; revision 03) available on UNFCCC webpage <http://cdm.unfccc.int/Projects/DB/SGS-UKL1163771000.02/view> No Change.

4.8 Environmental Impacts

As per <http://cdm.unfccc.int/UserManagement/FileStorage/E59WJRXAG9LYVVRROPLQ40H2Q2580O> Validation Report (CDM.Val0650 dated 2006-11-14; revision 03) available on UNFCCC webpage <http://cdm.unfccc.int/Projects/DB/SGS-UKL1163771000.02/view> No Change.

4.9 Local Stakeholder Comments

As per <http://cdm.unfccc.int/UserManagement/FileStorage/E59WJRXAG9LYVVRROPLQ40H2Q2580O> Validation Report (CDM.Val0650 dated 2006-11-14; revision 03) available on UNFCCC webpage <http://cdm.unfccc.int/Projects/DB/SGS-UKL1163771000.02/view> No Change.

5. List of Persons Interviewed

Date	Name	Position	Short Description of Subject Discussed
07/07/2008	Mr. N.S.Natarajan	In-charge CDM project	Monitoring practice adopted at plant site
07/07/2008	Mr. V. Krishnamoorthy	VP – operations	Monitoring practice adopted at plant site
07/07/2008	Mr. Rajesh Kumar	Project Consultant	Monitoring practice adopted at plant site and requirement under registered PDD monitoring plan

6. 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/ Revised Monitoring plan dated 30th December 2008
- /2/ Registered PDD version 04 dated 2nd November 2006
- /3/ Validation Report (CDM.Val0650 dated 14/11/2006; revision 03)
- /4/ AMS II D Version 07

- oOo -