Mr. Hans Jürgen Stehr
Chair, CDM Executive Board
UNFCCC Secretariat
CDMinfo@unfccc.int

2nd July 2007

Re Request for review of the request for registration for the CDM project activity "Energy efficiency measures at cement production plant" (Ref. no. 1068)

Dear Mr. Stehr,

SGS has been informed that the request for registration for the CDM project activity "Energy efficiency measures at cement production plant" (Ref. no. 1068) is under consideration for review because three requests for review have been received from members of the Board.

All three requests for review are based on the reasons outlined below. SGS would like to provide a response to the issues raised:

Requests for Review:

The PDD and monitoring plan, as appropriate, should transparently outline how the energy savings and emission reductions for each energy efficiency measure have been measured and/or calculated, and how the following sections of the methodology have been applied:

a) *Documenting the specifications of the equipment replaced*
b) *Metering the energy use of the industrial facility, processes or the equipment affected by the project activity*
c) *Calculating the energy savings using the metered energy obtained from subparagraph (b).*

SGS Response to comments:

Thirteen measures have been implemented in the plant over several years. All thirteen measures have been validated. As described in our validation report, section 3.4 – Application of monitoring methodology and monitoring plan, the above requirement of monitoring as per methodology has been met.
The specifications of the equipment replaced are documented and available at the project site and were verified during the site visit.
The baseline calculation in enclosure 3A & 3B to the PDD explains how the energy savings have been calculated. The tests were conducted to estimate the energy savings for each measure (modifications/VFD installations). The average energy consumed per hour was tested in pre and post project scenario and the savings were converted into energy saved per annum using the hourly operation of the individual measure. Although negligible, but keeping in mind the fact that the optimisation of clinker production can also reduce the electrical energy consumption in the plant, the specific energy consumption (SEC) of each measure was

calculated based on the electricity consumed by the individual measure per ton of clinker[1]. Therefore the reduction in SEC from the baseline is used for energy savings calculation of the measures in project years.

The electricity saved by the project activity would have been purchased from the northern regional grid and hence the northern grid emission factor was used as baseline emission factor. The energy savings from the project activity multiplied with grid emission factor gives the final emission reduction. The formulas used are as follows:

A) Pre-project scenario:

Energy consumed by the individual measure	= a	kWh
Reasonable hours of test	= b	hr
Energy consumed per hr	= a/b	kWh/hr

B) Post project scenario:

Energy consumed by the measure	= x	kWh
Reasonable hours of test	= y	hr
Energy consumed per hr	= x/y	kWh/hr

C) Energy saving:

Energy saved per hour	= x/y – a/b	kWh/hr
Annual running hours	= h	hrs
Annual clinker production	= w	tonne
Specific energy saved per annum (S)	= (x/y – a/b) x h/w	kWh/tonne of clinker

D) Estimated emission reduction:

Clinker production in the project year	= C	tonne
Annual energy saved	= C x S	kWh
Annual estimated emission reduction (tCO2e)	= C x S x baseline emission factor	

To meet the requirement of monitoring methodology, the following monitoring plan was adopted:

a) The specifications of the equipment replaced were documented in the plant and verified during site visit. The VFD installations were also verified with the purchase orders.
b) The energy use of the equipment affected by the project activity is being metered.
c) The energy saving is calculated using the metered energy obtained from sub-paragraph (b).

The following parameters are being monitored for the project activity:

1. Clinker production, (C), tonne
2. Energy consumption by each measure, (E), kWh
3. Operating hours (H), hrs
4. Power consumption of each measures, (P), kW
5. Emission factor, (EF), tCO2/kWh.

Emission Reduction Calculations:

[1] All the measures validated in the PDD were made up to clinkerization.

Baseline specific energy consumption (SEC_b)	= (a/b) x (running hrs/baseline clinker production)
Specific energy consumed (SEC_p) by the measure	= E/C kWh/tonne of clinker
Energy saved	= (SEC_b - SEC_p) x C kWh
Emission reduction (tCO2)	= (SEC_b - SEC_p) x C x baseline emission factor

As explained above, during the project years the actual energy consumption of the individual measure is being monitored daily with final clinker production. The SEC will be calculated monthly for each measure. The annual test will be conducted for power consumption of the individual measures. The operating hours are also being monitored of each measure of project activity. This will help to cross verify the energy consumption data of each measure.

The reduction in SEC by each measure in the project activity multiplied by the actual clinker production in project years will give the actual energy savings in the crediting years. The emission reductions will be calculated by multiplying energy savings with the grid emission factor.

The monitoring plan is appropriate and transparently outlines how the energy savings and emission reductions for each energy efficiency measure have been measured/calculated and how the monitoring plan of AMS.II.D version 08 has been applied for the project activity.

With the above explanation, we feel that the concerns of the EB have been taken into account. We do however apologize if this was not sufficiently clear from the validation report.

Sanjeev Kumar (+91 9871794628) will be the contact person for the review process and is available to address questions from the Board during the consideration of the review in case the Executive Board wishes.

Yours sincerely,

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Encl:
Annex 1: Summary of measures