



Validation opinion for post registration changes

Title of project activity: India-FaL-G- Brick and Blocks Project No.1		
CDM reference number:	DNV project No.:	
0707	PRJC-347796-2011-CCSNOR	
Date:	Validation of the changes were conducted:	
2 September 2013	<input type="checkbox"/> Prior to the commencement of a verification of the project activity <input checked="" type="checkbox"/> When performing a verification of the project activity	
Work carried out by (name & signature):	Work verified by (name & signature):	Approved by (name & signature):
Sharmistha Shome <i>sharmistha shome</i>	<i>Ole A. Flagstad</i> Ole A. Flagstad	<i>Ole A. Flagstad</i> Ole A. Flagstad

Overview of post registration changes

Type of post registration change		Are the changes of a type specified in Appendix 1 of the CDM Project Standard? Note: In case of "No", prior approval by the EB is required
A: Temporary deviations from the registered monitoring plan and/or monitoring section A)		<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> No post registration change of this type
Applicable period for proposed deviations (inclusive):	From DD/MM/YYYY start date of the earliest included deviation to DD/MM/YYYY end date of the latest included deviation)	
B: Corrections (refer to section B)		<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> No post registration change of this type
C: Changes to the start date of the crediting period (refer to section 0) <i>Prior approval by the CDM EB is not required in case of (a) bringing forward the start date up to one year earlier or (b) postponing the start date by up to one year (by up to two years for project activities in LDCs).</i>		<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> No post registration change of this type
Proposed start date of the crediting period:	DD/MM/YYYY (changed from DD/MM/YYYY)	
D: Permanent changes from the registered monitoring plan or applied methodology (refer to section D)		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> No post registration change of this type

E a): Changes to the project design of a registered project activity (refer to section D)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> No post registration change of this type
E b): Changes to the programme design of a registered PoA (refer to section E)	Note: All changes to the programme design of a registered PoA require prior approval by the EB. <input checked="" type="checkbox"/> No post registration change of this type
F. Changes specific to afforestation or reforestation project activities (refer to section F)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> No post registration change of this type

A. Temporary deviations from the registered monitoring plan and/or monitoring methodology

A.1 Description of deviation (including the reason for requesting a deviation)

Not applicable

A.2 Assessment of deviation

Assessment that the deviation does not require a revision of monitoring plan or the changes from the project activity as described in the registered project design document

Assessment of the impact of the deviation on the estimates of the emissions reductions for the proposed project activity with the use of approved methodology as existing and with the deviation

Not applicable

B. Corrections

B.1 Description of corrections

Not applicable

B.2 Assessment of corrections

Not applicable

C. Changes to the start date of the crediting period

No changes have occurred to the project activity that would result in a less conservative baseline

Not applicable

Substantive progress has been made by the project participants to start the project activity

Not applicable

D. Permanent changes from the registered monitoring plan or applied methodology

D.1 Description of the revision of the monitoring plan

As per the registered PDD, the production of FaL G bricks is monitored as per the FaL G brick production records of the units. The following updates have been done as per the guidance by the CDM Executive board in EB 46 (<http://cdm.unfccc.int/EB/046/eb46rep.pdf>):

- The production of the FaL-G bricks, as per the production records in the plant log book, shall be compared with the FaL-G brick production based on 1) quantity of fly ash consumption; 2) electricity and/or diesel consumption by the individual brick manufacturing units of the bundle.
- Inclusion of Sp. Cfa as a monitoring parameter in the revised PDD

D.2 Assessment of the revision of the monitoring plan

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

As per the registered PDD, the production of FaL-G bricks is monitored as per the FaL-G brick production records of the units.

In line with the proposed guidance for the revision of the monitoring plan by CDM EB, the production volumes of the FaL-G bricks shall be determined as the lowest value from the following three approaches:

- Quantity (volume) based on production records.
- Quantity (volume) based on fly ash consumption.
- Quantity (volume) based electricity and/ or diesel consumption.

In the registered PDD, the emission reduction calculation based on the quantity (volume) of FaL-G bricks as per the production records.. The project activity brick production on the basis of fly ash consumption and electricity and/or diesel shall be calculated as follows:

- a) Quantity (volume) based on fly ash consumption is calculated as the function of total fly ash consumption and the specific fly ash consumption of the brick manufacturing unit. Data for the fly ash consumption by the unit shall be sourced from the fly ash procurement invoices or the weighing slips. The specific fly ash consumption of the unit shall be derived from the mixed proportion declared by the

individual manufacturing unit during the enrolment in the bundle with the project proponent. The project proponent shall monitor the specific fly ash consumption for each unit once in six months through the site inspection and field survey. The result of the site inspection shall be available to the DOE during verification. The monitoring plan has been accordingly revised to include Sp. C_{fa} as a monitoring parameter in section B.7.1 of the revised PDD. The declared mixture shall be documented by Eco Carbon every six months for each of units and taken as basis for computation. However, without recorded data, if there is conflict of data noticed at site during inspection, the conservative i.e the higher mix content of fly ash, shall be considered for the calculation of FaL-G bricks. All the requisite data shall be available for verification during the verification period.

Quantity of FaL-G brick production = $Fa_{con}/Sp.C_{fa}$

Where,

Fa_{con} is the total fly ash consumption by the unit “x” for the corresponding year.

Sp.C_{fa} is the specific fly ash consumption.

- b) Quantity (volume) based electricity and/ or diesel consumption is calculated on the basis of electricity or diesel consumption and specific consumption of electricity and diesel.

The units in the project activity are categorised into certain types of brick manufacturing plants, where type I, II and III and VII are for electricity consumption and type IV is for diesel consumption. The specific consumption of electricity and diesel has been calculated based on the rated capacity of the motors, power consumption factor of the unit based on the aggregate motor load for each type of brick manufacturing plants unit and production per hour as observed during the field survey by the project proponent. The power consumption factor and the related output (production) per hour are based on the efficiency of the workers. The specific consumption factor has been concluded on the conservative figures. It has been verified from the field survey report, as conducted by project proponent that the workforce consists of 8 to 10 people in different type of brick manufacturing units. The study time consists of 2 to 4 hours. The result from the field study has been provided in Annexure 6 of the revised PDD. The specific diesel consumption and specific electricity consumption data has been determined ex-ante and was accepted by DNV based on the following facts:

(a) The values are derived based on the normal operating efficiency and it has been verified from the letters from brick unit owners that the manufacturing units shall not operate at the efficiency below the normal operating efficiency which was observed during the field study by the project proponent. Furthermore, in case the man power number or efficiency comes down, the labour stop working because they are paid by piece rate and thus their earnings are directly linked to output. Hence, further decrease in the efficiency of the manpower is deemed not likely.

(b) Any increase in man power efficiency is bound to decrease the consumption of electricity or diesel and decrease the specific consumption.

The low specific consumption value will give higher number of production.

Thus, it is concluded that the ex-ante fixed specific consumption of diesel and specific consumption of electricity shall result to the conservative of brick production.

The specific consumption factor of electricity is calculated as:

Power consumed (kWh per hour) divided by production (m³) per hour.

For the diesel engines, where the power consumption factor is not relevant, effective consumption of diesel per hour has been observed to be 1.8 litres per hour as per the field survey performed by the project proponent (Eco Carbon). Thus, the specific consumption of diesel has been calculated as:

Consumption of diesel (litres) per hour ÷ production (m³) per hour.

	Type I (electricity)	Type II (electricity)	Type III (electricity)	Type IV (diesel)	Type VII
Specific consumption factor	1.20 kWh/m ³	1.20 kWh/m ³	1.54 kWh/m ³	1.00 ltr/m ³	2.4 kWh/m ³

Based on the electricity consumption:

Quantity of FaL-G brick production = $\text{Elec}_{\text{con}} / \text{Sp.C}_{\text{elec}}$

Where,

Elec_{con} is the electricity consumption by the unit “x” for the corresponding year.

$\text{Sp.C}_{\text{elec}}$ is the specific electricity consumption of the unit, as fixed ex ante.

Based on the diesel consumption:

Quantity of FaL-G brick production = $\text{Diesel}_{\text{con}} / \text{Sp.C}_{\text{diesel}}$

Where,

$\text{Diesel}_{\text{con}}$ is the diesel consumption by the unit “x” for the corresponding year.

$\text{Sp.C}_{\text{diesel}}$ is the specific diesel consumption of the unit, as fixed ex ante.

The electricity consumption, diesel consumption and fly ash consumption shall be monitored and have been included in the revised monitoring plan.

The proposed revision of the monitoring plan is in accordance with the approved monitoring methodology applicable to the project activity whilst ensuring the conservativeness of the emission reductions calculation

The monitoring plan has been revised as per the guidance provided by the CDM Executive board in EB 46.

The findings of previous verification reports, if any, have been taken into account

Not applicable

E. Changes to the project or programme design of a registered project activity or PoA

E.1 Description of the changes as compared to the description in the registered PDD and description of the changes to the monitoring plan

Not applicable

E.2 Assessment of the changes to the project design (*applicable to project activities only*)

Assessment of when the changes occurred

Not applicable

Assessment of the reasons for these changes taking place

Not applicable

Assessment of whether the changes would have been known to the project participants prior to registration of the project activity

Not applicable

Assessment of how the changes may impact the overall operation/ability of the project activity to deliver emission reductions as stated in the PDD

Not applicable

E.3 Assessment of the impact of the changes to the project design (*applicable to project activities only*)

In the case of a project activity, do the changes adversely impact any of the following?

- ☐ The applicability and application of the applied methodology under which the project activity has been registered
- ☐ The additionality of the project activity
- ☐ The scale of the project activity
- ☐ None of the above

Assessment of impacts of the changes on the applicability and application of the applied methodology under which the project activity has been registered

Not applicable

Assessment of impacts of the changes on the additionality of the project activity

Not applicable

Assessment of impacts of the changes on the scale of the project activity

Not applicable

E.4 Assessment of the change to a PoA (*applicable to PoAs only*)

In the case of a PoA, do the changes relate to:

- ☐ Changes to programme boundary to expand geographical coverage or to include additional host Parties
- ☐ Changes to the eligibility criteria under the circumstances indicated in the “Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities” (e.g. to implement changes decided by the Board if an issue related to environment integrity is identified)
- ☐ If a PoA includes more than one generic CPA-DD, addition of specific actual case CPA-DDs corresponding to generic CPA-DDs for which a specific case CPA-DD has not been submitted at the time of request for registration of the PoA
- ☐ Changes to apply the provisions of the most recent versions of the “Standard for sampling and surveys for CDM project activities and programme of activities”

Note: No other types of changes are permitted

Not applicable

F. Changes specific to afforestation or reforestation project activities

Not applicable

Validation opinion

DNV recommends the approval of the revised monitoring plan submitted by the project participants.

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