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Att: CDM Executive Board

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CDM Ref 2143	ZXJ/RAFI/BRINKS	23 February 2009

Response to request for review of the project "Nanning Shizuo Non-Carbonated Raw Material for Cement Production Renovation Project" (2143)

Dear Members of the CDM Executive Board,

We refer to the issues raised by the requests for review by three Board members regarding project activity, "Nanning Shizuo Non-Carbonated Raw Material for Cement Production Renovation Project" (UNFCCC reference number 2143) and would like to provide the following responses to the issues raised.

Comment 1: The DOE shall further clarify how it has validated the financial analysis in accordance with EB 38, paragraph 54 guidance, in particular, the investment requirements for raw material switching, the cost of CCR applied, and the cost savings in energy consumption and material transportations due to the project activity.

DNV Response:

Step 1: Assess the sources of the input parameters

DNV has validated the input parameters used in the investment analysis and the procedures are as following:

- **Investment requirements for raw material switching**

As part of the validation, the validation team of DNV confirmed that the values used in the Financial Analysis spreadsheet and the financial data in the PDD are fully consistent with the FSR with respect to equipment procurement investment, installation engineering investment, construction investment, and other investments. The investment of fixed assets in the FSR was 29.3959 million RMB *(including: equipment procurement investment of 14.1944 million RMB; Installation engineering investment of 2.713 million RMB; Construction investment of 8.2933 million RMB; Other investment of 3.852 million RMB and Fluid capital 0.3449 million RMB)*

- **The cost of CCR applied due to the project activity**

DNV verified from the financial Annex (concerning cost of CCR due to the project activity) to FSR and confirmed that data used in the IRR spreadsheet are all sourced from the FSR and by its expert judgment that the financial inputs represent current circumstances of the Chinese cement industry. The cost of CCR applied due to the project activity is verified to be 4.7 million RMB as calculated as the difference between a) annual operating and maintenance costs for the project with CCR and b) annual operating and maintenance costs for the current practice without CCR.

- **Revenues due to the substitution of limestone and clay by non-carbonated calcium source**

DNV verified the financial Annex to the FSR and the spreadsheet and concluded that the revenues due to the substitution of limestone by carbide slag was 0.8212 million RMB.
The cost of CCR of 20 RMB/t is purely due to transportation costs based on the agreement between the carbide slag provider and the project proponent. The actual cost of CCR is estimated as 41.82 RMB/t according to corresponding local regulation[1] (Guijianguan, No.51 [2006]), but the CCR producer pays part of the cost. A low cost of CCR favour the project and is conservative.

- **Cost savings accounting fuel consumption reduction due to energy gains of a non-occurrence of some chemical reactions that were expected in the regular way of clinker processing**

This is also verified to be in compliance with FSR data and cost savings in energy consumption (electricity and coal) is 10.2738 million RMB. This is due to reduction in coal consumption from 162.92 kg/t-cement to 126 kg/t-cement with a coal price of 470 RMB/t. The corresponding reduction in electricity consumption is from 109.54 kWh/t-cement to 101.74 kWh/t-cement with an electricity price of 0.56 RMB/kWh. The annual cement production was 474 300 tonnes. All data are from the FSR.

Step 2: Confirm that the values used in the PDD are fully consistent with the FSR

Investment requirements for raw material switching used in the financial analysis of this project are taken from the FSR that was developed by Chengdu Construction Materials Research & Design Institute in January 2007 and the FSR was approved by Nanning Municipal Development and Reform Commission on 29 January 2007.
A feasibility study report (FSR) in China is required to be developed by a third party accredited by the government and this accrediting agency is responsible for the accuracy of the information in the FSR and bears the risks of loosing its accreditation in the event of falsifying in the reporting.
An approval letter of the FSR is issued by the government only after it passes the public assessment of the sectoral experts designated by the government. A feasibility study report can in DNV's opinion thus be regarded as an accurate and trustworthy report coming from a recognized entity once it has been approved by the government.

Step 3: Assess the period of time between the finalization of the FSR and the investment decision

The FSR has been the basis of the decision to proceed with the investment in the project. The FSR of the proposed project was approved by Nanning Municipal Development and Reform Commission on 29 January 2007, thus only 4 moths prior to the decision to proceed with the project activity (i.e. the start date of the project) which was on 21 May 2007.

Step 4: Cross-check the parameters used in the financial analysis with the parameters used by other similar projects

DNV by using its local sectoral expertise was able to confirm that that the costs which have been adopted from the FSR represent current situation of Chinese cement sector including the fixed investment cost, material cost and labor being appropriate for a cement plant of this size.

The details of the input parameters in the investment analysis can be seen in the enclosed spreadsheet.

[1] http://www.nngczj.com/news00.asp?id=2168

Comment 2: The DOE is requested to further clarify how the elimination of Alternative baseline scenario 3 – 100% substitution of traditional raw materials, limestone and clay is validated and confirmed.

DNV Response:

Scenario 3: A scenario in which traditional raw materials, limestone and clay, are 100% substituted by noncarbonated calcium source.
DNV verified and concluded that this scenario is unrealistic and should be eliminated due to insufficient availability of CCR and no other alternative CaO in the proximity of the project activity.

1) Since the PVC production line owned by Nanning Chemical Industry Co., Ltd. is the only one carbide slag source in GZAR[2], and other carbide slag sources out of the province are far away (at least more than 250 km) from the project site.
2) Due to the industry structure of GZAR (Guangxi Zhuangzu Autonomous Region), there is no other comparable amount of non-carbonated source other than carbide slag which can be used in the proposed project.[3,4] Therefore, other non-carbonated material option is unrealistic and should not be taken into account.

We sincerely hope that the Board find our elaboration on the above satisfactory.

Yours faithfully
for DET NORSKE VERITAS CERTIFICATION AS

H.W. Brinks

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[2] Proof of the investigation results on carbide slag source in GZAR
[3] http://www.nh.com.cn/Cn/about.Asp
[4] http://msx.nanning.gov.cn/4832/2008_12_26/4832_308268_1230278191531.html