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São Paulo, April 03th 2007

### Request for Review UNFCC, dated March 26<sup>th</sup>, 27<sup>th</sup> 2007for the CDM Project 0854

"Production of blended cement with blast furnace slag at Cimento Mizu"

**Request 1a** 

### **Reason for Request**

Only a couple of lines (9 in total) of text explain/claim two **barriers**, without any further substantiation; this is unacceptable. Moreover claiming an increase of production costs as barrier is not sufficient without presenting data on the cost savings of reducing the amount of clinker.

Barrier 1: development of logistics for additives supplying. The use of additives in a reliable and continuous manner required the development and control of a new supply chain in the process involving different sites and suppliers.

Barrier 2: the use of slag increases the production costs of the blended cement because it adds news steps in the production chain, its availability and quality depends on third parties, the maintenance costs increase due to difference in equipment operations, and the performance of the installation decreases (productivity decreases). Also the milling of slag increase production costs because it is harder than clinker requiring more energy in the mills and slag is more abrasive and corrosive than clinker incurring in greater maintenance costs.

### **Barrier 1 (logistics) justification**

Blast furnace slag is supplied to the Mogi das Cruzes plant by 2 (two) suppliers. One is COSIPA faraway 150 km from the plant and the price for the slag is R\$26.00 per ton and R\$14.00 per ton in average for the transportation truck fleet. The ideal scenario is 100% supplied by COSIPA, however it does not have sufficient capacity to attend Mizu demand.

To guarantee the supply of 13,000 tonnes of slag necessary to Mogi das Cruzes plant production, Cimento Mizu receives slag also from CSN, who transports the slag to one of the Votorantim plants at Volta Redonda city, Rio de Janeiro state, faraway 290 km from the Mogi das Cruzes plant. Slag cost is R\$31.13 per ton to the material, and R\$35.00 per ton in average to the transport fleet.

The need of a second supplier, which is not available in an economic viable distance from the plant demonstrates the lack of slag in the proximity. This also causes a high cost for the material as well as a delay in transportation.

Annex to this document, there are copies of the receipts from Cosipa and Votorantim-Volta Redonda to evidence the location and distance to Cimento Mizu, Mogi das Cruzes. Cosipa is situated at Estrada de Piaçaguera km06, Cubatão -SP and Votorantim is situated in Fazenda Três Poços, s/n, Bairro Industrial, Volta Redonda – RJ.

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### Barrier 2 (cost) justification

Table below shows the average cost to produce CPIII and CPII.

It is demonstrated that the cost of production of CPIII is higher than CPII, mainly due to the increase in material costs, maintenance cost, working force and outsourcing services.

Table 1 – Cement production cost companison by type or mile or					
Cost Components	CP III	CP II			
	R\$/ton	R\$/ton			
Raw material	53,27	56,53			
Goods	10.40	7.40			
(Electric energy, packing, gas)	12,42	7,42			
Working force	1,94	1,94			
Maintenance	3,15	2,62			
Raw material handling	1,71	1,71			
Outsourcing Service	2,17	1,81			
Materials – Diverse	0,85	0,36			
Dispatch	1,69	1,69			
Improvements	1,60	1,60			
TOTAL	78,8	75,68			

Table 1 – Cement	production a	cost comparison	hy type	CP III e CP II
		cost companison	Ny Lype	

These data are available in the Cimento Mizu control system in the "Custos Operacionais MZMO month/year.xls" spreadsheet that is generated by the Microsiga Corporate System.

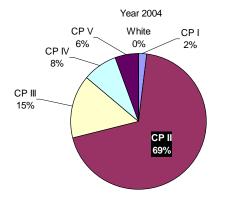
### **Request 1b**

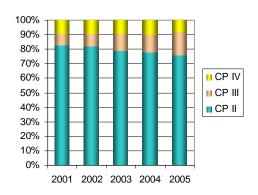
The **common practice** check is just surpassed by claiming: Project proponents do not have access to information about any other activity implemented previously or currently underway that is similar to the proposed project activity, except for the projects under Votorantim Cimentos which owns Cimento Mizu.

Since Votorantim covers 40% market share in Brazil and owns cement plants in the US and Canada and is a member of SNIC, the National Brazilian Syndicat of the Cement industry in Brazil, to which all large cement producers (Holcim, Lafarge, Cimpor etc) are a member, it is not clear why no more information would be available.

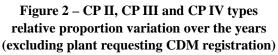
Figure 1 shows the cement production per type in 2004 in Brazilian Market. It is possible to observe that CPIII and CPIV which are blended cement types that permit high additive share, have low participation in the overall national market, around 23%. Figure 2 shows the CP II, CP III and CP IV relative participation variation over the years from 2001 to 2005. The major cement manufacture in Brazil's produced amount is excluded form the data as they are also claiming for CDM registration (CDM reference: 0754). The CPIII and CPIV participation in the market did not change significantly over the years, evidencing that blended cement production in Brazilian Market is not a common practice. Cimento Mizu, has changed all its production from CPII to CPIII regardless for the common practice.

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### Figure 1 – Brazilian Market Cement Production Distribution by Type in 2004



Reference: Sindicato Nacional da Indústria de Cimento ("Brazilian National Cement Industries Trade Union"). *Annual Report 2005*. (available at <u>http://www.snic.org.br/25set1024/index.html</u>).

### **Request 2**

### **Reasons for Request:**

1. **Benchmark** analysis for best **20%**: As the cement type CP III can contain between 35 and 70% of additives (p. 9 of PDD), how can the project developers substantiate that the average additive content of CP III is 35% (as used on p. 50 for the baseline calculation)? The same problem applies for cement type II E (p. 9 specifies 6- 34%) This is clearly not conservative. Unless they can provide independent evidence that the average share of additives is lower, 70% of additives have to be used for CP III and 34% for CP II E. The benchmark has to be recalculated accordingly, reducing clinker share from 0.71 to 0.41. (A presentation by Cimento Mizu at the Latin American Carbon Forum in Quito in March 2006 gives an average blending rate for CP III of 60% and 34% for CP II E)

2. **Benchmark** analysis **5** highest blending plants: The project developers do not provide the blending share for each of the 5 highest plants, but only a "black box" average figure. The blending share for each plant in the list has to be provided. I also do not understand how the blending share of the five highest blenders is *lower* than the average blending share derived if one uses the numbers for CP III and CP II E provided at the top of p. 51 and the shares of CP III and CP II E cement in production listed on p. 50 of the PDD.

The presentation by Cimento Mizu at Latin American Carbon Fórum in March 2006 presents the clinker share after project activity start, which had begun in 2005. Therefore, this value cannot be used as plant baseline.

The reason for the data discrepancy in the 5 highest blending plants is that there was a mistake in the year chosen to calculation. It was used data from 2001, and not 2004 that is the baseline year. Please refer to "Mizu-CERs-2007.04.02.xls" worksheet annexed to this document for revised data.

About the blending share for the top 5 highest brands some need to notice that the value supplied by SNIC (Brazilian National Cement Industries Trade Union) is not by plant, but by brand and manufacture. The same brand can be produced in different plants with different shares.

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Share of clinker for the top 5 brand were analyzed in a laboratory, excepting for the Top 1 brand which is plant operation data, and Top 4 (CP III) which is a market practice estimation, explained below.

As can bee seen in Figure 1, CP III is not a common practice in Brazil, and for the best of our knowledge, cement manufacturer decides to produce CP III when additive share is exceeding the CP II regulatory limits. Add to this, the fact that as discussed above, producing blended cement with high slag share is more expensive than producing with low slag share, and that other cement producers in Brazil are claiming CDM registration to increase slag share.

Considering all the above reasons, there is no reason for the manufactures to produce slag blended cement with a share more than the highest limit permitted by the standard for CP II that is 34%. For a conservative assumption, 2% more slag share was assumed. Combining the slag 36% share with the highest limit of 5% for carbonatic materials for CP III, there is a blending additive share of 41%, giving a clinker share of 59%. This value is used both in the 5 highest brands, and Top 20% market.

In the 5 highest brands, the Top 2 brand manufacturer is requesting CDM registration for the substitution of CP II to CP III, which project activity started in 2001. For this reason, this second highest brand was excluded from the top 5 brand and included in its place the 6<sup>th</sup> highest brand.

In the market Top 20%, for the same reason explained above, CP III production amount of the Top 2 brand was excluded.

All these alterations result in a change in the benchmark share of clinker.

New CER calculation spreadsheet "Mizu-CERs-2007.04.02.xls" is annexed to this document.

### **Request 3**

1. Only a brief text describes/claim two barriers, without any further substantiation.

Moreover claiming an increase of production costs as barrier is not sufficient without presenting data on the cost savings of reducing the amount of clinker.

2. The common practice check is just surpassed by claiming:

Project proponents do not have access to information about any other activity implemented previously or currently underway that is similar to the proposed project activity, except for the projects under Votorantim Cimentos, which owns Cimento Mizu.

Since Votorantim covers 40% market share in Brazil and owns cement plants in the US and Canada and is a member of SNIC, the National Brazilian Syndicat of the Cement industry in Brazil, to which all large cement producers (Holcim, Lafarge, Cimpor etc) are a member, it is not clear why no more information would be available.

These requests are the same of Request 1. Please refer to explanation in the Request 1 above.