

August 28, 2009

Securities and Exchange Commission  
Division of Corporation Finance  
100 F Street, N.E.  
Mail Stop 7010  
Washington, D.C. 20549-0306

RE: CEMEX, S.A.B. de C.V.  
Form 20-F for the year ended December 31, 2008  
File No. 1-14946

Ladies and Gentlemen:

On behalf of CEMEX, S.A.B. de C.V. (the "Company"), this letter provides responses to the comment letter from the staff (the "Staff") of the Securities and Exchange Commission (the "Commission") to Mr. Héctor Medina, Executive Vice President of Finance and Legal Affairs of the Company, dated August 26, 2009 (the "Comment Letter"), in connection with the Company's annual report on Form 20-F for the year ended December 31, 2008 (the "2008 20-F"), filed with the Commission on June 30, 2009. The Company's responses to the comments raised by the Staff in the Comment Letter are set forth below. For the convenience of the Staff, we have repeated each of the Staff's comments before the corresponding response.

**FORM 20-F FOR THE YEAR ENDED DECEMBER 31, 2008**

**Item 5 – Operating and Financial Review and Prospects, page 67**

**Critical Accounting Policies, page 69**

**Impairment of Long-Lived Assets, page 72**

- 1. We have reviewed your response to prior comment 4 of our letter dated August 5, 2009. We noted based on your response that you have consistently applied the same methodology for the years ended December 31, 2008, 2007 and 2006. Please show us in your supplemental response how you will enhance your disclosure in future filings regarding how assumptions used for assessing goodwill for impairment in the current year have changed since the prior year.**

**RESPONSE:** The Company's revised disclosure, marked to show the additions to its current disclosures in order to enhance in future filings the Impairment of Long-Lived Assets policy included in the Critical Accounting Policies section of the Form 20-F, is as follows:

*Impairment of long-lived assets*

Our balance sheet reflects significant amounts of long-lived assets (mainly fixed assets and goodwill) associated with our operations throughout the world. Many of these amounts have resulted from past acquisitions, which have required us to reflect these assets at their fair market values at the dates of acquisition. According to their characteristics and the specific accounting rules related to them, we assess the recoverability of our long-lived assets at least once a year, normally during the fourth quarter, as is the case for goodwill and other intangible assets of indefinite life, or whenever events or circumstances arise that we believe trigger a requirement to review such carrying values, as is the case with property, machinery and equipment and intangible assets of definite life.

Goodwill is evaluated for impairment by determining the value in use of the reporting units, which consists of the discounted amount of estimated future cash flows to be generated by such reporting units to which goodwill relates. A reporting unit refers to a group of one or more cash generating units. Each reporting unit, for purposes of the impairment evaluation, consists of all operations in each country. An impairment loss under MFRS is recognized by the amount by which such discounted cash flows are lower than the net book value of the reporting unit. In applying the value in use method, we determine the discounted amount of estimated future cash flows over a period of five years, unless a longer period is justified in a specific country considering its economic cycle and the situation of the industry.

For the years ended December 31, 2006, 2007 and 2008, the geographic segments we reported in note 17 to our consolidated financial statements included elsewhere in this annual report, each integrated by multiple cash generating units, also represent our reporting units for purposes of testing goodwill for impairment. Based on our analysis, we concluded that the operating components that integrate the reported segments have similar economic characteristics, by considering: (a) the reported segments are the level used by us to organize and evaluate our activities in the internal information system, (b) the homogenous nature of the items produced and traded in each operative component, which are all used by the construction industry, (c) the vertical integration in the value chain of the products comprising each component, (d) the type of clients, which are substantially similar in all components, (e) the operative integration among operating components, evidenced by the adoption of shared service centers, and (f) the compensation system of any of our country operations is based on the consolidated results of the geographic segment and not on the particular results of the components.

Significant judgment is required to appropriately assess the value in use of our reporting units. Impairment evaluations are significantly sensitive to, among other factors, the estimation of future prices of our products, the development of operating expenses, local and international economic trends in the construction industry, as well as the long-term growth expectations in the different markets. Likewise, the discount rates and the rates of growth in perpetuity used have an effect on such impairment evaluations. We use specific discount rates for each reporting unit, which consider the weighted average cost of capital of each geographic segment. This determination requires substantial judgment and is highly complex when considering the many countries in which we operate, each of which has its own economic circumstances that have to be monitored. Additionally, we monitor the lives assigned to these long-lived assets for purposes of depreciation and amortization, when applicable. This determination is subjective and is integral to the determination of whether impairment has occurred.

As mentioned above, in the determination of our reporting units' value in use, the amounts of estimated undiscounted future cash flows are significantly sensitive to the growth rate in perpetuity applied. Likewise, the amounts of discounted estimated future cash flows are significantly sensitive to the weighted average cost of capital (discount rate) applied to each reporting unit. We use after-tax discount rates, which are applied to after-tax cash flows. The higher the growth rate in perpetuity applied, the higher the amount obtained of undiscounted future cash flows by reporting unit. Conversely, the higher the discount rate applied, the lower the amount obtained of discounted estimated future cash flows by reporting unit. The discount rates and growth rates in perpetuity used in the reporting units that represent the majority of the consolidated balance of goodwill under MFRS in 2008 and 2007 were as follows:

Reporting units	Discount rates		Growth rates	
	2008	2007	2008	2007
United States	9.2%	9.3%	2.9%	2.5%
Spain	10.8%	9.6%	2.5%	2.5%
Mexico	12.0%	10.3%	2.5%	2.5%
Colombia	11.8%	10.8%	2.5%	2.5%
France	11.2%	9.6%	2.5%	2.5%
United Arab Emirates	13.0%	9.8%	2.5%	2.5%
United Kingdom	9.8%	9.4%	2.5%	2.5%
Australia 1	11.1%	—	2.5%	—
Range of discount rates in other countries	11.3% – 15.0%	8.9% – 13.1%	2.5%	2.5%

<sup>1</sup> The reporting units acquired from Rinker were not tested for impairment in 2007, considering that the related net assets were recorded at their estimated fair values as of the acquisition date of July 1, 2007 and there were no significant changes in such values as of December 31, 2007.

Except for the United States, where the discount rate decreased slightly in 2008 as compared to 2007 considering a reduction in interest cost, in the majority of the countries the discount rates increased in 2008 as compared to 2007 as a result of increases in the applicable premium risk associated with each country. In connection with the growth rates in perpetuity used for the reporting units, except for the United States, where we applied a slightly greater rate considering the extraordinary economic downturn in 2008 and the expected rebound from historically low levels of activity, in all countries we applied the same rates in 2008 and 2007.

Based on impairment tests made during the last quarter of 2008 under MFRS in connection with the annual review (see note 10C to our consolidated financial statements), goodwill impairment losses were determined for our reporting units in the United States, Ireland and Thailand for approximately Ps17,476 million (U.S.\$1,272 million). Likewise, considering triggering events in the United States during the fourth quarter of 2008, we tested our intangible assets of definite life in that country and determined that the net book value of certain trademarks exceeded their related value in use and recorded impairment losses of approximately Ps1,598 million (U.S.\$116 million) (see note 10 to our financial statements included elsewhere in this annual report). In addition, we recognized impairment losses during the fourth quarter in connection with the permanent closing of operating assets for an aggregate amount of approximately Ps1,045 million (U.S.\$76 million) (see note 9 to our consolidated financial statements).

Considering differences in the measurement of fair value, including the selection of economic variables and market considerations, as well as the methodology for determining final impairment losses between MFRS and U.S. GAAP, our impairment losses under U.S. GAAP in 2008 amounted to approximately U.S.\$4.9 billion, including the impairment losses determined under MFRS, of which, approximately U.S.\$4.7 billion refer to impairment of goodwill. Considerable management judgment is necessary to estimate undiscounted and discounted future cash flows under U.S. GAAP. See note 25 to our financial statements included elsewhere in this annual report.

## Item 18 – Financial Statements

Note 25 – Differences Between Mexican and United States Accounting Principles, page F-66

### (1) Impairment of Long-Lived Assets, page F-75

2. We have reviewed your response to prior comment 7 of our letter dated August 5, 2009. Based on your disclosure on page F-76 and your response to prior comment 8, it appears you also utilize operating EBITDA multiples in your goodwill impairment testing. As such, please disclose in future filings a sensitivity analysis of operating EBITDA multiples based upon reasonably likely changes and quantify the impact if these reasonably likely changes occurred. Please show us in your supplemental response what the revisions will look like.

**RESPONSE:** The Company notes and will comply with the Staff’s comment in future filings, by quantifying the estimated additional results under the Company’s sensitivity analysis in connection with its operating EBITDA multiples. The Company proposes to include a complementary table for this purpose. The new table, had it been included in the Company’s reconciliation to U.S. GAAP for the year ended December 31, 2008, would have been as follows:

In connection with the Company’s operating EBITDA multiples included in the table above, the pro forma impairment charges under U.S. GAAP that would have resulted from an independent change of plus or minus five percentage points in the estimated operating EBITDA, regarding those reporting units that experienced an impairment loss or presented a relative impairment risk in 2008, excluding effects that would arise from the second step process under U.S. GAAP, would have been as follows:

(Millions of pesos)	Reporting units	Recognized impairment charges	Pro forma impact of five percentage points increase / decrease in operating EBITDA	
			Impairment charges	
			-5 Pts	+5 Pts
United States	Ps	62,358	65,704	59,012
Thailand <sup>1</sup>		1,047	—	—
Venezuela <sup>1</sup>		559	—	—
Ireland <sup>1</sup>		248	—	—
Australia		—	579	—
The Philippines		—	—	—
United Kingdom		—	—	—
Total impairment charges	Ps	64,212	66,283	59,012

<sup>1</sup> The sensitivity columns in the table above exclude impairment charges for an aggregate amount of approximately Ps1,854 related to Thailand, Venezuela and Ireland, considering that in connection with these reporting units, at December 31, 2008, the entire goodwill balance was completely removed under both MFRS and U.S. GAAP. Therefore, any change in the estimated operating EBITDA for these reporting units would not result in any additional impairment charges.

**Acknowledgment Statement**

The Company acknowledges that:

- the Company is responsible for the adequacy and accuracy of the disclosures in its filings;
- Staff comments or changes to disclosures in response to Staff comments, do not foreclose the Commission from taking any action with respect to the filings; and
- the Company may not assert Staff comments as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

If you should have any questions about this letter or require any further information, please contact Jaime Leal Ammler (CEMEX Accounting Technology Director - Controllership) at +52 (81) 8888-4183, or our U.S. legal counsel Robert M. Chilstrom (Skadden, Arps, Slate, Meagher & Flom LLP) at 212-735-2588.

Very truly yours,

By: /s/ Héctor Medina  
Name: Héctor Medina  
Title: Executive Vice President of Finance and Legal Affairs