

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, 2007
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 Planning and Finance of the Company, dated February 25, 2009 (the "Comment Letter"), in connection with the Company's annual report on Form 20-F for the year ended December 31, 2007 (the "2007 20-F"), filed with the Commission on June 30, 2008. 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, 2007

Note 23 — Subsequent Events, page F-66

- 1. We have reviewed your response to prior comment 5. To provide context to the potential impairment loss regarding your Venezuelan investment, please provide a convenience translation related to your disclosure that on August 20, 2008 you received from the Government of Venezuela a compensation proposal for US\$650. In this regard, we note your disclosure of the Ps 6,877 net book value of your investment in Venezuela as of December 31, 2008.**

RESPONSE: The Company notes and will comply with the Staff's comment in its 2008 20-F annual report by including a convenience translation next to the amount corresponding to the offer from the Government of Venezuela. Considering the exchange rate of 13.74 pesos per dollar at December 31, 2008, the convenience translation would have been Ps8,931.

General

2. We have reviewed your response to prior comment 7. We note that a significant amount of the balance of your definite lived intangible assets at December 31, 2007 arose from the acquisition of Rinker and you did not test these assets for impairment during 2007 considering the proximity between the valuation date and year-end. You also provided us information regarding the methods and assumptions used in the initial valuation of intangible assets arising from the acquisition. Please confirm that you will disclose in future filings the significant methods and assumptions used in your analysis and explain the basis for each such assumption in a manner similar to which you provided us in the table included in your response letter.

RESPONSE: The Company notes and confirms that it will disclose in its 2008 20-F annual report the significant methods and assumptions used in its analysis and will explain the basis for each such assumption in a manner similar to that provided to the Staff in the table included in the Company's earlier response letter.

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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 Planning and Finance