



UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549-7010

February 17, 2009

via U.S. mail and facsimile

Roberto Phillipps, CFO
Ternium S.A.
46A, Avenue John F. Kennedy—2nd floor
Luxembourg L-1855

**RE: Ternium S.A.
Form 20-F for the Fiscal Year Ended December 31, 2007
File No. 001-32734**

Dear Mr. Phillips:

We have reviewed your response letter dated January 20, 2009, and have the following additional comments.

1. We have read your response to prior comment 7. You state the company “has not become aware of any indicators that would suggest that the carrying amount of the “available-for-sale” financial asset recorded at each of June 30, 2008 and September 30, 2008 might not be fully recoverable. Accordingly, no impairment charge is required.” Please clarify the following issues regarding your application of IAS 39.

- Your letter states that “any difference between the carrying amount and the fair value at each reporting date is recognized directly in equity”. However, Note 12 in the Form 6-K filed November 6, 2008 states that “The initial measurement of the available-for-sale asset – discontinued operations is the carrying amount of the company’s investment in Sidor at March 31, 2008 (IAS 27). A subsequent remeasurement was not performed. Thus, the carrying amount of this available-for-sale asset at September 30, 2008, does not represent its fair value at that date”. Please clarify how you have complied with your stated policy. In estimating fair value, please clarify for us how you complied with paragraphs 48 and 62 of IAS 39 at June 30, 2008 and at September 30, 2008. Given the requirement to use market-based assumptions, please explain to us how you considered the apparent, substantial disparity between your market capitalization and the net carrying value of your assets (total equity) at September 30, 2008 and at December 31, 2008. A conclusion that the fair value of your Sidor investment equaled or exceeded its carrying value would presumably be inconsistent with the company’s quoted stock price unless the fair value of the company’s remaining assets was actually negative. We also note media reports of an \$800 million offer by Venezuela for the company’s Sidor stock.

- In July 2008 the Venezuelan government assumed operational control of Sidor. Note 12 to the September 30, 2008 financial statements in the November 6, 2008 form 6-K reflects substantial historical operating cash flows generated by Sidor. Paragraph 59(f) of IAS 39 states that objective evidence of impairment includes observable data indicating that there is a measurable decrease in the estimated future cash flows from the asset. Presumably, Venezuela's expropriation of Sidor will reduce, and possibly eliminate, your access to Sidor's operating cash flows. Please tell us how you considered this impairment indicator in your analysis. Please specifically address the corresponding impact on the impairment measurement test outlined in paragraph 67 of IAS 39.
- We note that Sidor's operations are exclusively controlled and managed by Venezuela. Accordingly, there does not appear to be any market for your Sidor common stock since presumably the stock does not convey substantive voting, dividend or liquidation rights. Given the guidance in paragraphs 59(e) and 61 of IAS 39, please tell us how you considered this impairment indicator in your analysis. Please specifically address the corresponding impact on the impairment measurement test outlined in paragraph 67 of IAS 39.

2. The information requested above should also be provided in future filings, including the 2008 Form 20-F and in financial statements that purport to comply with IFRS.

3. You state in your response that "even if the Venezuelan government were eventually to effect a formal or mandatory transfer of title to the shares to Venezuela pursuant to Decree Law 6058, the "available-for-sale" classification under IAS 39 should be retained because the Company's right to obtain a fair compensation for its shares qualifies for recognition as a financial asset under paragraph 11(c)(i) of IAS 32". This guidance is applicable to contractual rights to receive cash or another financial asset from another entity. It is unclear how you could conclude that you have a contractual right for compensation in the absence of formal title to the shares or a legally binding agreement for compensation that is acknowledged by the Venezuelan government. The prospect of any compensation is contingent on future events such as the outcome of legal proceedings and negotiations with the government. Further, there is no assurance regarding the outcome of such proceedings, including whether fair or adequate compensation will be realized. The guidance in paragraphs 31-35 of IAS 37 would appear to apply. In addition, it appears that paragraphs 17-20 of IAS 39 would apply to non-voluntary transfers of financial assets.

4. The accountants report on the September 30, 2008 financial statements states that "it is not possible to foresee the outcome of the nationalization process and its impact on the financial statements of Ternium, including the valuation of Ternium's investment in Sidor". There is a concern that this language could reasonably be construed by readers as a scope limitation. Given that qualified audit opinions are not permitted in filings with

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the Commission, such language would not be appropriate in an audit report that is included in the company's filings.

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As appropriate, please respond to these comments within 10 business days or tell us when you will provide us with a response. Please furnish a letter that keys your responses to our comments and provides any requested supplemental information. Detailed response letters greatly facilitate our review. Please file your response letter on EDGAR. Please understand that we may have additional comments after reviewing responses to our comments.

You may contact Tracey McKoy, Staff Accountant, at (202) 551-3772 or, in her absence Al Pavot at (202) 551-3738 or the undersigned at (202) 551-3355 if you have questions regarding comments on the financial statements and related matters. Please contact Hagen Ganem at (202) 551-3330 with any legal related questions.

Sincerely,

Terence O'Brien
Accounting Branch Chief