



DIVISION OF
CORPORATION FINANCE

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549-4631

October 28, 2011

Via Facsimile

Mr. Pablo Brizzio
Chief Financial Officer
Ternium S.A.
29, Avenue de la Porte-Neuve – 3rd floor
L-2227 Luxembourg

**Re: Ternium S.A.
Form 20-F for the Fiscal Year Ended December 31, 2010
Filed June 30, 2011
Response Letter Dated October 17, 2011
File No. 1-32734**

Dear Mr. Brizzio:

We have reviewed your response and have the following comments. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to this letter within ten business days by amending your filing, by providing the requested information, or by advising us when you will provide the requested response. If you do not believe our comments apply to your facts and circumstances or do not believe an amendment is appropriate, please tell us why in your response.

After reviewing any amendment to your filing and the information you provide in response to these comments, we may have additional comments.

Form 20-F for Fiscal Year Ended December 31, 2010

Engineering Comments

1. We note your response to our previous comment number 9 in our letter dated September 29, 2011. We believe disclosing the expected mining life for each of your mines would provide useful information to investors. Please provide the requested information in future filings.
2. Additionally, please disclose the utilization for each of your iron ore mining facilities as required by Item 4.D of Form 20-F.

Mr. Pablo Brizzio
Ternium S.A.
October 28, 2011
Page 2

Closing Comments

You may contact John Coleman, Mining Engineer, at (202) 551-3610 with questions about engineering comments. Please contact me at (202) 551-3355 with any other questions.

Sincerely,

/s/ Terence O'Brien

Terence O'Brien
Branch Chief