



DIVISION OF
CORPORATION FINANCE

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

September 20, 2012

Via Facsimile

Mr. Charles D. McClane, Jr.
Chief Financial Officer
Alcoa Inc.
390 Park Avenue
New York, NY 10022-4608

Re: Alcoa Inc.
Form 10-K for Fiscal Year Ended December 31, 2011
Filed February 16, 2012
Response Letter Dated August 15, 2012
File No. 1-03610

Dear Mr. McClane:

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 10-K for Fiscal Year Ended December 31, 2011

Financial Statements

Note A – Summary of Significant Accounting Policies

1. As it appears you have determined the existence of proven mineral reserves within your organization, please revise in future filings beginning with your next quarterly report, all relevant accounting policy disclosures where proven mineral reserves are used in accounting measurements to clearly state that you amortize or determine such amounts using “proven mineral reserves.”

Mr. Charles D. McClane, Jr.
Alcoa Inc.
September 20, 2012
Page 2

Engineering Comments

2. We understand that you have agreed to provide production and reserve information for your mines. While you have agreed to provide this additional disclosure, you also indicate that you continue to believe that Alcoa is not engaged in significant mining operations. We are unable to agree with your conclusion. As comment 13 in our June 18, 2012 letter indicates, we view your mineral processing operations as an extension of your mining operations. Your mining/processing operations appear to be significant and have a material impact on the viability of your company, both from a supply and a cost basis. Consequently, we expect that you will provide complete Industry Guide 7 disclosure in your next annual report, in addition to the production and reserve information you plan to provide. If you have questions about the disclosure required under Industry Guide 7, please contact us at the numbers provided at the end of our letter.

Closing Comments

You may contact Kevin Stertzel at (202) 551-3723, or Anne McConnell at (202) 551-3709 if you have questions regarding comments on the financial statements and related matters. You may contact George K. Schuler, Mining Engineer, at (202) 551-3718 with questions about engineering comments. Please contact me at (202) 551-3768 with any other questions.

Sincerely,

/s/ W. John Cash

W. John Cash
Branch Chief